A COMPARATIVE ANALYSIS OF FUNDAMENTAL GUITAR TECHNIQUES INCLUDING THOSE OF THE NINETEENTH CENTURY AND THE PRESENT

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TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

Teaching techniques to beginners is an important and challenging endeavor. Improper or vague fundamental technique instruction can cause students to develop ineffective habits. These habits influence not only their future performance but also their physical health. This dissertation provides the guitarist with information that assists in choosing appropriate methods for students by analyzing similarities and differences in order to determine the purpose and eventual outcomes of each method. By comparing the content of each method, one gains a thorough understanding of the strengths of each method. It is in this light that this dissertation benefits guitarists and instructors, supplying them with six different methods that they can use as their source for developing their own pedagogies.

Problem statement

A guitar instructor not only needs to pay attention to a student's positions (sitting, left-hand, and right-hand), but also to fingers (nails, direction of stroke, and contact point). Moreover, teaching a student to relax their body and use efficient movements is important for building a strong foundation. However, these aspects are often difficult to explain. For instance, relaxation and tension are difficult to assess with an untrained eye, and in order to improve, requires that the student pays attention to the kinesthesia of fingers and muscles. The instructor cannot easily demonstrate relaxation and tension. Moreover, the instructor can only observe some features—rigid fingers or improper positions—to determine potential problems caused by tension. In addition, some subtle and fast movements, such as alternating fingers and stroking strings, require instructors to simplify movements into step-by-step procedures.

Improper demonstrations and vague explanations may cause misunderstandings and develop detrimental habits in students. The majority of college freshmen need to deal with problems of rudimentary techniques in the first semester/year. Some of them need to start with very basic lessons because their initial instruction was inconsistent. Many students feel frustrated and discouraged to learn the same materials again, especially those who have played guitar for several years, and it is more difficult for advanced students to modify improper habits.[1] This indicates that inexperienced instructors often do not pay enough attention to the correct teaching of fundamental techniques. Additionally, choosing the most appropriate method for the individual student may be a challenge for inexperienced instructors. Likewise, teaching and performing are two separate skills that are not always mutually inclusive.[2] In other words, the guitarist who performs at high levels and has advanced training understands how to use both hands to perfectly produce tones or efficiently use motions. They may have learned these techniques when they were young, so they may have forgotten the details of how their instructor explained these techniques. Some guitarists may have gifted physical abilities; therefore, they did not pay attention to the details of fundamental techniques in the beginning phase.

The purpose

The purpose of this dissertation is to inform readers of the strengths and differences of four modern methods as they relate to Fernando Sor's *Methods for the Spanish Guitar* (1830) and Dionisio Aguado's *New Guitar Method* (1843). The four modern methods include Charles Duncan's *The Art of Classical Guitar Playing* (1980), Abel Carlevaro's *School of Guitar:*

1 Bonnie Jan Schwartzer, "Classical Guitar: Methods for The Evaluation of Technique and The Gradation of Repertoire" (master's thesis, California State University, 1983), 7–8.

2 Ice B. Risteski, "A New Guitar Teaching Philosophy," *Enero-Abril* 18, no. 1 (2008): 36.

Exposition of Instrumental Theory (1984), Aaron Shearer's *Classical Guitar Technique* (1990), and Pepe Romero's *La Guitarra—A Comprehensive Study of Classical Guitar Technique and Guide to Performing* (2012). By reading this dissertation, guitarists and instructors are able to understand the evolution and development of fundamental guitar techniques from the nineteenth century to the present. Moreover, this dissertation provides guitarists and instructors with a better understanding of fundamental guitar techniques as demonstrated by these six books. Guitarists can use the study as a reference to check the fundamental techniques, while instructors can understand how to appropriately apply these methods to individual students.

Significance of the study

Many guitar performers observe the importance of teaching fundamental guitar techniques in their published books. Duncan mentions that "high achievement is usually raised upon a foundation of conscious craft."[3] Bonnie Jan Schwartzer, the author of "Classical Guitar: Methods for The Evaluation of Technique and The Gradation of Repertoire," reveals that many students need to spend time correcting ineffective habits and faulty techniques due to the lack of proper instruction of the basic techniques.[4] Christopher Berg, the guitar professor of University of South Carolina, indicates that "each area and improvement will logically grow out of the development and cultivation of earlier skills."[5] In Soner Uluocak's article "A Comparison of Selected Classical Guitar Teaching Methods and A Review of Their Implications for Guitar Education," he writes, "the introductory stage of classical guitar education is critically important

3 Charles Duncan, *The Art of Classical Guitar Playing* (Miami, FL: Summy-Birchard, Inc., 1980), vii.

4 Schwartzer, "The Gradation of Repertoire," 7–8.

5 Christopher Berg, *Mastering Guitar Technique: Process & Essence*. (Pacific, MO: Mel Bay Publications, 1997), 7.

as students gain the fundamental playing techniques and motor skills at this level."[6] One of the most famous guitarists, Pepe Romero, also states, "I work with unceasing patience and devotion on my technical studies until I am worthy happily to awaken the sleeping melodies and unite my heart with that of the audience in the bond of the divine art of music."[7]

Researchers have addressed the importance of instructors choosing appropriate materials for students of different proficiencies. In the article "Guitar Class—A Multifaceted Approach," Lee R. Bartel addresses the importance of choosing the appropriate method for meeting a student's needs. He also indicates that guitar instructors not only need to have better performance skills, but also need to have enough knowledge of different methods. He further claims that each method has its limitations and strengths; therefore, it is important for instructors to choose the most appropriate approach for each individual.[8] Berg indicates that students may be confused and unable to learn if the instructor does not provide them with an appropriate level of material.[9] In addition, Ice B. Risteski discusses the philosophy of guitar teaching in "A New Foundation of Guitar Philosophy." He mentions that quality guitar instruction incorporates an instructor's knowledge of methods and abilities of observations.[10] In other words, instructors should be able to observe and assess each student's learning style and provide appropriate methods. Risteski believes that it is important for instructors to understand what practice effectively meets an individual student's needs. He suggests that for providing a better teaching environment,

6 Soner Uluocak, "A Comparison of Selected Classical Guitar Teaching Methods and A Review of Their Implications for Guitar Education," *Cukurova University Faculty of Education Journal* 41, no.2 (2012): 43.

7 Pepe Romero, *La Guitarra–A Comprehensive Study of Classical Guitar Technique and Guide to Performing*. (Tampa, FL: Tuscany publications, 2012), 8.

8 Lee R. Bartel, "Guitar Class: A Multifaceted Approach," *Music educators journal* 77, no.2 (1990): 42.

9 Berg, *Mastering Guitar Technique*, 4.

10 Ice B. Risteski, "A New Foundation of Guitar Philosophy," *Theoria* 15, no.2 (2006): 91.

instructors need to have the ability to express their thoughts about music, to communicate clearly, and to discover and develop students' talents.[11] Furthermore, Gerrit Lukas Roos's dissertation "The Development of Right Hand Guitar Technique with Reference to Sound Production" addresses the importance and the evolution of the right-hand technique. According to Roos, lacking knowledge of correct right-hand movement at the beginning level will cause faulty habits and improper formation of technique.[12] These ineffective habits, rigid adherence to inappropriate information, or excessive muscular tension will influence performers' future playing—especially their perceptions of themselves.[13]

Although most guitarists understand the importance of fundamental techniques, some instructors are unable to provide students with proper and complete instruction of fundamental techniques. This could be true for a number of reasons. The first reason is that an instructor lacks knowledge of effective methods. Shearer reveals that effective instructions are lacking because "guitar is a comparatively late arrival on the serious music scene."[14]

On the other hand, guitarist Cornelia Susanna Van der Walt states that a number of guitar instructors are still using older methods, which has led to detrimental results in students' techniques.[15] For instance, the size of the nineteenth-century guitar is different than the modern guitar. Harvey Turnbull—the author of *The Guitar from the Renaissance to the Present Day*—

11 Risteski, 92.

12 Gerrit Lukas Roos, "The Development of Right Hand Guitar Technique with Reference to Sound Production" (master's dissertation, University of Pretoria, 2009), 1.

13 Berg, *Mastering Guitar Technique*, 4–5.

14 Aaron Shearer, "The Classical Guitar Grows Up," *Music Educators Journal* 58, no.2 (1971): 54.

15 Cornelia Susanna Van der Walt, "The Relevance of The Teaching Methods of Dionisio Aguado, Fernando Sor and Andres Segovia for Guitar Technique in The Late 20th Century" (master's thesis, University of South Africa, 1996), 5.

mentions that the main difference in the modern model is increasing body size.[16] As a result, some nineteenth-century exercises and etudes may be difficult to play on the modern guitar. The material of the string is also a factor to consider about the relevance of nineteenth-century methods. According to Turnbull, the guitar strings were originally made of gut and silk wound together, and top strings frequently broke. He indicates that the nylon string became the standard string around 1940. Moreover, it replaced the gut and silk-wound strings because nylon brings greater volume and better balance of the tone.[17] Roos indicates that the material of the string and the sitting position are the main reasons that influenced the change of right-hand techniques. Roos also mentions that since modern guitarists pursue precision of notes, some right-hand techniques are not used anymore.[18] However, the importance of nineteenth-century methods cannot be denied, such as right-hand positions, stroking movements, and left-hand techniques. Therefore, it is important for the guitarist to rethink and be aware of the benefits and deficiencies of the nineteenth-century methods.

The second cause of ineffective guitar instruction can be that some guitar instructors do not have comprehensive knowledge of guitar methods. Van der Walt mentions that inexperienced guitar instructors often randomly choose a method based on what is locally available. They do not know how to assess a student's abilities and levels to choose the most appropriate method.[19] On the other hand, Van der Walt claims that qualified guitar instructors, who receive standard music education or guitar pedagogy training, often work with advanced

16 Harvey Turnbull, *The Guitar from the Renaissance to the Present Day* (Westport, CT: The Bold Strummer LTD., 1974), 62.

17 Turnbull, 79.

18 Roos, "Right Hand Guitar Technique," 98.

19 Van der Walt, "The Relevance of The Teaching Methods," 1.

students within colleges or higher-level institutions.[20] Because these instructors often teach advanced guitar students, they rarely deal with beginners. Therefore, they spend little time explaining details of fundamental technique. Some instructors have difficulties teaching beginners, or they do not sequence techniques in an effective order. The third cause is that students typically want to play a complete piece as soon as possible rather than work on exercises. Therefore, they lack the patience to work on fundamental techniques. Berg observes this problem in his method: "Students and instructors sometimes become sidetracked, or are simply not skilled in diagnosing and solving problems."[21]

There are several scholars who have compared different guitar method books. This dissertation, however, provides not only the guitarist with the relationship between four modern methods and two nineteenth-century methods, but also compares the differences of four modern methods as they relate to my learning and teaching experiences. Moreover, this dissertation outlines techniques associated with the etudes presented in the six methods. Positions and movements are discussed in greater detail for several specific issues. My tables highlight the primary points of each subject and help the reader to quickly scan the needed information. Furthermore, techniques are discussed and organized progressively by technical levels, so the instructor can follow this dissertation and teach students sequentially based on their levels. Teaching recommendations are also included in this dissertation, which allow the guitar instructor to follow students' responses and provide the most appropriate approaches and instructions.

20 Van der Walt, 1.

21 Berg, *Mastering Guitar Technique*, 7.

Literature review

Because most performers understand the importance of fundamental guitar techniques, there are many methods and pedagogies being published today. Many scholars who have dealt with this issue have organized the evolution of fundamental techniques, introduced the way of choosing the appropriate method books, discussed proper positions and efficient movements, and dissertated tension and muscular injuries. Schwartzer's dissertation organizes important fundamental techniques and creates an observational scale for evaluating students. This scale includes a specific description of incorrect and correct fundamental techniques, divided into five parts: tuning, sitting position, position of guitar, positions of right arm and right hand, and positions of left arm and left hand.[22] Schwartzer also grades guitar repertoire by musical texture, technique, and fingerboard positions. This grading method provides guitar instructors with a tool with which to appropriately choose repertoire for different level students. Moreover, this tool helps students and instructors understand the importance of the techniques needed to perform each piece.[23]

Bartel's article provides readers with five points to help guitar instructors choose the most appropriate method, which enable students to develop personal musicianship, to discover music talent, to grow the quality of their musical lives, to improve self-expression, and to participate in the rites and rituals of society.[24] Since Bartel emphasizes the choice of appropriate materials for each student, in the second part of his article, he introduces different groups of guitar class, such as hum and strum, guitar orchestra, rock band, jazz ensemble, and solo

22 Schwartzer, "The Gradation of Repertoire," 11.

23 Schwartzer, 73–152.

24 Bartel, "A Multifaceted Approach," 42.

classical guitar. For the solo classical guitar group, Bartel mentions that instructors need to provide students with the clearly defined technique necessary to perform on the classical guitar.[25]

Van der Walt's dissertation demonstrates the relevance of the teaching methods of Aguado, Sor, and Andres Segovia (1893–1987) by comparing them with many modern guitar methods and interviewing guitar professors. The dissertation includes an overview of the development of the guitar, an introduction to methodological materials from the vihuela to the modern single-string guitar, and advanced analysis of teaching methods of Aguado, Sor, and Segovia.[26] Van der Walt discusses fundamental guitar techniques, such as sitting position, right-hand and left-hand techniques, fingering and scale techniques, right-hand stroke and refinement of tone, ornamentation, and transcriptions.[27]

Risteski's article "A New Foundation of Guitar Philosophy" mentions that a good method gives readers information not only on how to do it but also why we do it.[28] Improper or vague fundamental technique instruction will cause students to have ineffective habits. These habits influence not only their future performance but also their physical health. Therefore, as a guitar instructor, it is important to understand the strengths of each method and to create pedagogies by choosing or combining appropriate methods for each student.[29] The conditions of an effective method in this article can be utilized as the reference to analyze these six methods' strengths. In the article "A New Guitar Teaching Philosophy," Risteski indicates that choice of the appropriate

25 Bartel, 43.

26 Van der Walt, "The Relevance of The Teaching Methods," 12–206.

27 Van der Walt, 7.

28 Risteski, "Foundation of Guitar Philosophy," 92.

29 Risteski, 92.

methods should be made according to students' learning styles and needs.[30] He states that, "professional guitar teaching practice is not constrained by a belief that there is one best way."[31] The guitar instructor should always follow students' responses to the given instructions and provide the most appropriate demonstrations and explanations.[32]

In the dissertation "Paradigm for Effective Pre-College Classical Guitar Methodology: A Case Study of Two Models of Effective Instruction", Renthungo Merry interviews instructors of two guitar programs, one using traditional method books and the other using the Suzuki method. The results indicate that traditional methods introduce sight-reading at the beginning level, while the Suzuki method emphasizes learning by ear.[33] Furthermore, the author discusses the importance of choosing the appropriate method for individuals. There are many variables in teaching. It is important for an instructor to have a comprehensive understanding of effective teaching, which includes observing individual differences, understanding diverse learning styles and abilities, and providing the appropriate method to meet students' needs.[34]

Roos's dissertation outlines the development of right-hand techniques from Renaissance to modern methods. In this study, Roos focuses on tone production for right-hand technique, such as how a performer applies nails, fingertips, or a combination of both to produce sound, and how some performers avoid rest stroke completely and others combine rest stroke and free stroke willingly.[35] He also provides the guitarist with a history of right-hand technique, including the

30 Risteski, "Guitar Teaching Philosophy," 37–38.

31 Risteski, 38.

32 Risteski, 35.

33 Renthungo Merry, "Paradigm for Effective Pre-College Classical Guitar Methodology: A Case Study of Two Models of Effective Instruction" (doctor's dissertation, University of Northern Colorado, 2010), ii.

34 Merry, 125–127.

35 Roos, "Right Hand Guitar Technique," 8–9.

use of rest stroke, free stroke, fingernails, and flesh only.[36] The Roos study discusses modern methods that were written by Hector Quine, John William Duarte, John Taylor, Abel Carlevaro, Lee Ryan, Charles Duncan, Anthony Glise, Julian Byzantine, and Joseph Urshalmi.[37]

The study "On the Complexity of Classical Guitar Playing: Functional Adaptations to Task Constraints" tested six professional guitarists playing the same sequences in a fixed tempo with different fingerings.[38] The results indicate that most guitarists prefer fingerings in the lower positions and without changing positions.[39] Moreover, the author concludes that it is important to keep the joints in their comfortable midway positions. The guitarist needs to understand the timing and the strength of pressing strings.[40] One can find that the results of this study accord with the principles of efficient movement, which are using minimum energy and simplifying motions.

A proper position helps the guitarist to avoid unnecessary tension in the body and further prevents playing-related injuries. In the article "Fundamental Positions for Instrumental Musicians," Tubiana, Chamagne, and Brockman indicate that a desired posture not only supports freedom of movement but also applies minimum stress on the body.[41] The authors provide the guitarist with an overview of the fundamental position, such as the placement of the left-hand thumb and the deviation and inclination of the right hand.[42] The authors mention that

36 Roos, 10–18.

37 Roos, 7–8.

38 Hank Heijink and Ruud G. J. Meulenbroek, "On the Complexity of Classical Guitar Playing: Functional Adaptations to Task Constraints," *Journal of Motor Behavior* 34, no. 4 (2002): 339.

39 Heijink and Meulenbroek, 348.

40 Heijink and Meulenbroek, 339.

41 Raoul Tubiana, Philippe Chamagne, and Roberta Brockman, "Fundamental Positions for Instrumental Musicians," *Medical Problems of Performing Artists*, June 1989, 73.

42 Tubiana et al., 75.

compared with other instruments, there are a variety of gestures in guitar playing and that some may create tension easily. Therefore, the authors suggest that the guitarist should always remember to return to the most natural positions after unnatural movements.[43]

In the dissertation "The Conscious Guitarist: Alexander Technique and Body Mapping for Guitarists," Alma Sehic indicates that vague instruction for positions and movements may cause misunderstanding and long-term injuries in students. However, due to the lack of appropriate muscular training and body awareness, some guitar instructors teach students based on their personal experiences.[44] In the dissertation, Sehic provides the reader with principles of Alexander Techniques and Body Mapping.[45] To enhance performing abilities and prevent injury, the author suggests that the guitarist needs to develop self-awareness, inhibit faulty movements, and process every movement by thought. The author also includes checklists to help the guitarist to determine improper positions.[46]

Bráulio Bosi provides the reader with an overview of different injuries and strategies of preventing injuries in the dissertation "Becoming A Healthier Guitarist: Understanding and Addressing Injuries."[47] Causes of injuries include the use of different guitar supports, improper sitting positions, and inefficient left- and right-hand movements.[48] To prevent these injuries, the guitarist should understand how the body works and follow its natural extension and alignment.

43 Tubiana et al., 76.

44 Alma Sehic, "The Conscious Guitarist: Alexander Technique and Body Mapping for Guitarists" (master's thesis, University of South Carolina, 2014), 6.

45 Sehic, 12–38.

46 Sehic, 72–81.

47 Bráulio Bosi, "Becoming A Healthier Guitarist: Understanding and Addressing Injuries" (doctor's dissertation, University of Missouri-Kansas City, 2016), 18–46.

48 Bosi, 83–124.

Moreover, Bosi mentions that warming-up, taking breaks, and stretching exercises are effective strategies against playing-related injuries.[49] The author also suggests that due to the lack of self-awareness of tension, the instructor should be aware of any possible misunderstanding in students and provide the most appropriate explanations.[50]

Procedures

Sor and Agaudo were great masters of their craft. Duncan's, Carlevaro's, and Shearer's methods are used in most guitar pedagogy classes. Romero is an international performer who teaches master classes all over the world. He is the only one who is actively performing internationally. Therefore, this dissertation has chosen these methods to compare similarities, differences, and strengths.

In this dissertation, fundamental guitar techniques are divided into five parts: sitting position, right-hand techniques, left-hand techniques, tension in the body, and the techniques associated with etudes. Through discussions and charts of similarities and differences, the reader will have a comprehensive understanding of each method. The guidelines of guitar techniques provide the guitarist with some approaches used by modern guitarists. The reader can also understand how these six methods relate to my learning and teaching experiences. The development of fundamental techniques focuses on the relationship between four modern methods with two of the most influential nineteenth-century methods: Sor's *Methods for the Spanish Guitar* (1971) and Aguado's *New Guitar Method* (1981). The original *Methods for the Spanish Guitar* was published in 1830, but this dissertation will use the 1971 version translated by A. Merrick. *New Guitar Method* was first published in 1843, but this dissertation will use the

49 Bosi, 47–75.

50 Bosi, 6.

1981 version translated by Louise Bigwood. The reader can discover what fundamental techniques are still used today and what techniques have been modified or discarded. Moreover, the study provides the guitarist with the reasons for modifying and discarding these techniques.

The discussions of tension in the body, etudes and exercises, and the use of six methods leads to the answers of the following questions: What are the strengths in each method, and how much content does the author include about the awareness for resolving tension? In what way does the author's background and physical difference influence the content of the method? What are the variables presented by the different methods? What level of student can be taught using these specific methods? This dissertation also identifies and organizes etudes and exercises from the studies to aid the guitarist in searching for needed technical exercises. It is in this light that this dissertation benefits guitarists and instructors, supplying them with six different methods that they can use as sources for developing their own pedagogies.

CHAPTER TWO: GLOSSARY

This research will be easier to comprehend if some terms are explained in advance:

Right-hand fingers

The symbols of right hand thumb and fingers are taken from the Spanish terms *pulgar, indice, medio, anular,* and *chico. P* is the thumb, *i* is the index finger, *m* is the middle finger, *a* is the ring finger, and *c* is the little finger. To avoid confusion, these letters will be italicized when they appear within text: *p, i, m, a, c* (see figure 2-1).

Left-hand fingers

The left-hand fingers are labeled thumb, 1st finger (index finger), 2nd finger (middle finger), 3rd finger (ring finger), and 4th finger (little finger) (see figure 2-2). Arabic numbers will be used in the music examples and etudes to indicate the left-hand fingerings. Ex. 1, 2, 3, 4.

Figure 2-1. Right-hand fingers
(Shearer 1990, 29)

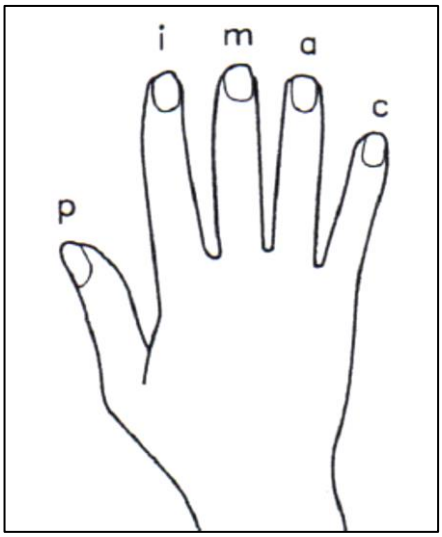
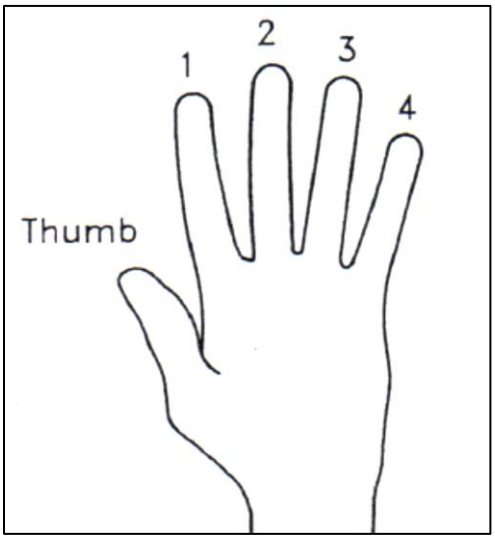


Figure 2-2. Left-hand fingers
(Shearer 1990, 29)



The wrist

Curved vs. arched refer to lifting the wrist higher or lower (see figure 2-3). Deviated is identified as turning the wrist either toward the left or right (see figure 2-4). Tilted is identified as dropping down the right or left side of the hand (see figure 2-5).

Strings

The 1st string is the highest string and the 6th string is the lowest string (see figure 2-6).

Figure 2-3. The position of the wrist (Duncan 1980, 39–44)

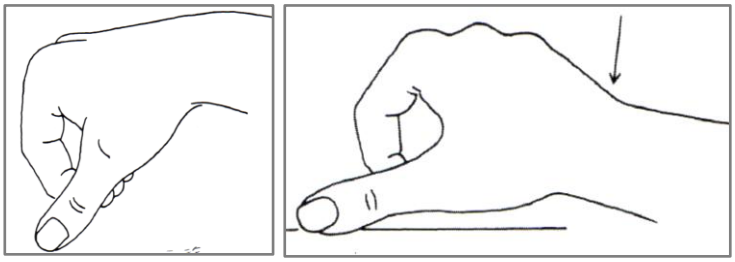


Figure 2-4. The deviation of the wrist (Shearer 1990, 32)

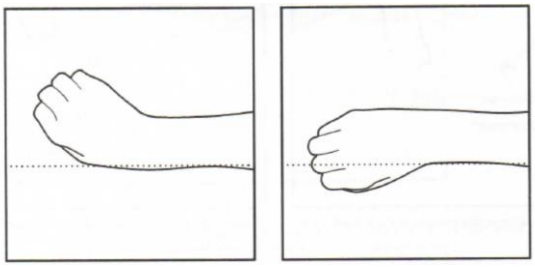


Figure 2-5. The tilt of the hand (Shearer 1990, 35; Carlevaro 1984, 18)

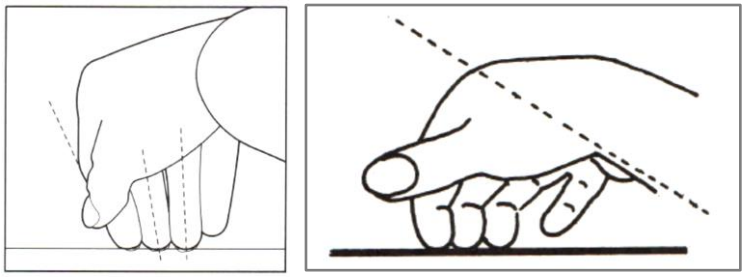
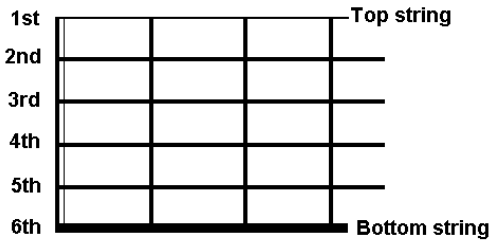


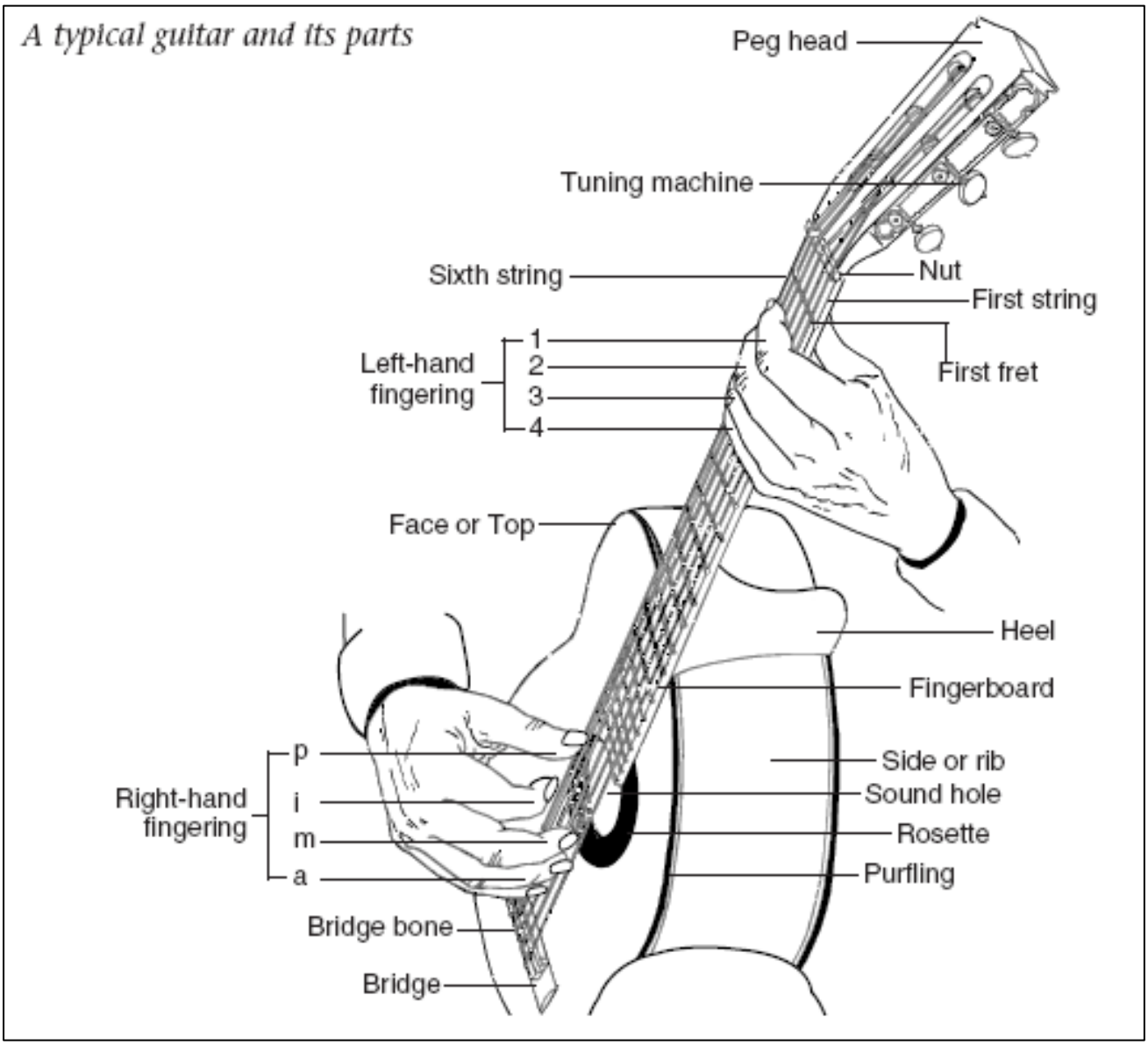
Figure 2-6. Strings



Frets

Guitar frets are thin strips that are embedded in the neck of the guitar. There are twenty frets, though some guitars may have twenty-one frets. Frets are numbered from the top of the guitar: the 1st fret is next to the nut. Arabic numbers will be used in the text to indicate the frets: the 1st fret, the 2nd fret, and so on (see figure 2-7). Roman numerals will be used in the music examples and etudes to indicate the frets.

Figure 2-7. The name of guitar parts (A typical guitar and its part n.d.)



Joints

The joints of the fingers include the tip joint, the middle joint, and the knuckle. The joints of the thumb are the P-tip, the P-middle, and the P-wrist (see figure 2-8).

Phalanges

The phalanges of the fingers are the tip phalange, the middle phalange, and the knuckle phalange. The phalanges of the thumb are the P-tip phalange, the P-middle phalange, and the P-wrist phalange (see figure 2-9).

Figure 2-8. The name of joints (Shearer 1990, 30)

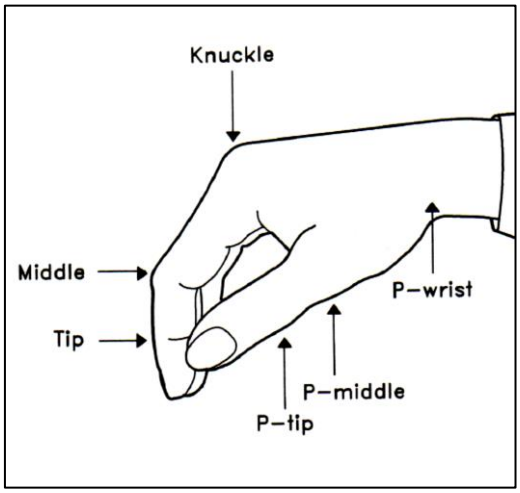
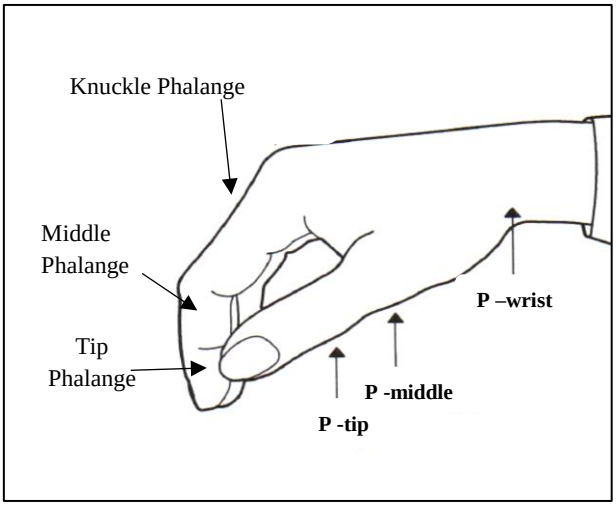


Figure 2-9. The name of phalanges



CHAPTER THREE: BIOGRAPHICAL BACKGROUND OF THE AUTHORS & OVERVIEW OF THE SIX METHODS

Biographical Background of The Authors

Fernando Sor

Fernando Sor (1778–1839) was a Spanish classical guitarist, teacher, and composer. His guitar output includes etudes, sonatas, fantasias, variations, waltzes, a serenade, bagatelles, duets, and various works for voice and guitar. Sor also composed operas, symphonies, string quartets, and a motet. Sor spent his early life in Spain. His father, Juan Sor, was an amateur guitarist and inspired Fernando to become a musician. Turnbull indicates that the six single-string guitar was not yet standardized, so the first instrument Sor studied might well have been the six-course guitar.[51] After the death of his father, he was sent to a monastery in Montserrat, where he learned harmony, counterpoint, and composition.[52] His first opera, *Telemaco en la Isla de Calipso*, was performed in 1797. During this time, Sor met Federico Moretti (1769–1839) who motivated Sor to write contrapuntal guitar music and to start using the six single-string guitar.[53] From 1798 to 1813, Sor came under the patronage of the Duchess of Alba in Madrid and Duke Medina-Celi in Barcelona. He composed two symphonies, three string quartets, and a number of songs in this period. In 1813, he decided to leave Spain and moved to Paris.[54] During his time in Paris, Sor published his first guitar works and became a teacher of the instrument. Moreover, the success of his ballet allowed him to travel around London and Moscow as a guitar soloist. Sor met Aguado

51 Turnbull, *Guitar from the Renaissance*, 63.

52 Maurice J. Summerfield, *The Classical Guitar: Its Evaluation and Its Player Since 1900* (Newcastle-upon-Tyne: Ashley Mark Publishing Co, 1991), 199.

53 Summerfield, 199.

54 Turnbull, 84.

(see below) and they became friends in Sor's later years. He dedicated his duo *The Two Friends op.41* to Aguado. During this final period, Sor published many compositions, including his *Method for the Spanish Guitar* (1830), which contains fundamental techniques that are still used today.

Dionisio Aguado

Dionisio Aguado (1784–1849) was a guitar performer, composer, and educator. He studied music with Padre Basilio (born Miguel García). Aguado began an intense study of the guitar and music in 1803. He published his first method *Escuela de Guitarra* in 1825. After the death of his mother, Aguado moved to Paris, and he wrote a considerable amount of music and presented various concerts. While staying in Paris, Aguado and Sor developed a social and musical friendship, even though they had different technical approaches to the guitar. Aguado's second method *Nouvelle Méthode de Guitare op.6* was published in 1834. Aguado returned to Madrid by late 1837 and stayed there until his death in 1849. During this time, Aguado published his third method *Nuevo Método para Guitarra* (1843). *Escuela de Guitarra* is a complete method for the guitar, and *Nouvelle Méthode de Guitar* is a method for beginners.[55] *Nuevo Método para Guitarra* includes Aquado's experiences of teaching and concertizing.[56] Aguado also invented the tripodison, which was a three-legged stand to improve the volume of the guitar and improve the sitting position.[57] It has since been replaced by new devices to support the guitar, such as the A-Frame and the Murata guitar support.

55 Van der Walt, "The Relevance of The Teaching Methods," 36.

56 Dionisio Aguado, *New guitar Method*, ed. Brain Jeffery (London: Tecla Editions, 1981), xiv.

57 Summerfield, 25.

Abel Carlevaro

Abel Carlevaro (1916–2001) was a Uruguayan guitarist, composer, and educator. Carlevaro learned harmony and counterpoint in Montevideo. He studied guitar with one of the most influential guitarists, Segovia, for nine years. His method, *School of Guitar Exposition of Instrumental Theory*, was published in 1979, while the English version was printed in 1984. Carlevaro believed that learning the guitar requires a logical theory. He claimed that a lack of proper concepts and sufficient experience would cause difficulties while developing techniques.[58] Therefore, Carlevaro emphasized mental concentration, correct positions, and efficient movements in his method. After World War II, Carleavro traveled to Europe and Asia for seminars and masterclasses. Through these activities, his ideas gained international recognition.

Pepe Romero

Pepe Romero (1944–) is a Spanish guitarist. At age three, he learned guitar from his father, Celedonio Romero, and he had his first professional concert when he was seven years old. Romero moved to California with his family in 1958. During the 1960s, he performed solo recitals and in the family quartet, Los Romeros, with his father and brothers Angel and Celin. He also played duos with Angel or Celin. He is currently a guitar professor in University of Southern California. His method *La guitarra* was published in 2012.

Aaron Shearer

Aaron Shearer (1919–2008) was an American guitarist and educator. He started playing the guitar at age nine. He performed many recitals during the 1940s. Around 1949, Shearer

58 Abel Carlevaro, *School of Guitar: Exposition of Instrumental Theory* (London: Boosey &Hawkes, 1984), i.

started his teaching career because of a severe issue of tendinitis in his right hand.[59] He was a faculty member of Washington's American University, which founded the first degree for guitar in the USA. In the mid-1960s, he joined the faculty at Peabody Conservatory in Maryland and started the guitar program. In 1981, he was the director of the guitar programs at North Carolina School of the Arts. Shearer's publications include *Classical Guitar Technique* method books, three volumes of *Learning the Classic Guitar* series, and *The Shearer Method-Classic Guitar Foundation* with a DVD and CD. The *Learning the Classic Guitar* series was published in 1959.

Charles Duncan

Charles Duncan is a guitarist and educator. He studied guitar at Yale University in the late 1950s. In 1970, he went to Segovia Master Class in Spain as a scholarship recipient. Duncan had recitals and taught master classes in the United States, Canada, and France from 1975 to the 1990s. His publications include *The Art of Classical Guitar Playing* (1980), *Classical Guitar* (1980), *A Modern Approach to Classical Guitar* (1981), and *Guitar at Sight* (1997). He wrote *The Art of Classical Guitar Playing* to help the guitarist understand fine playing and how to achieve this idea.[60] Duncan is primarily focusing on private teaching, recitals, and ensemble playing.

Overview of The Six Methods

Authors may emphasize different topics based on their background. Sor was a composer and educator, and he wrote not only about guitar techniques but also music composition. Aguado was also an educator; therefore, he discusses common problems encountered by students.

59 Aaron Shearer, *Learning the Classic Guitar—Part 1* (Pacific, MO: Mel Bay Publications, Inc., 1990), i.

60 Duncan, *Classical Guitar Playing*, vii.

Carlevaro taught masterclasses in several countries, and he viewed practicing with improper form as a critical problem. Therefore, his method emphasizes efficient fijación (fixating certain joints of the fingers) to illustrate the use of muscles.[61] Romero is a well-known guitar performer, and he teaches master classes all over the world. In his method, he mentions some general techniques—used by the majority of modern guitarists—and emphasizes individual differences. Shearer had muscular issues caused by improper tension; his method addresses efficient movements and the natural approach. As an educator, Duncan indicates that most people misunderstand the guitar and believe playing is easy. This thought causes many improper positions and further creates dysfunctional tension.[62] Duncan believes that the learning progress should be deliberate; therefore, he provides the guitarist with detailed applications of functional tension.[63] Moreover, he also includes several illustrations associated with poor positions.

To apply these methods appropriately, one must understand the application of different methods based on level. Shearer and Duncan both indicate which level is most appropriate for their methods. Shearer claims that his method is basically written for beginners; however, the experienced guitarist can also apply this method to examine their fundamental techniques.[64] Duncan claims that his publication focuses on more advanced concepts of guitar techniques; therefore, the content is not addressed to beginners.[65] Sor, Aguado, Carlevaro, and Romero do not apply their methods to a particular level. Although their methods arrange techniques progressively, beginners may face some confusion and difficulties while using them alone. For

61 Carlevaro, i.

62 Duncan, vii.

63 Duncan, vii.

64 Shearer, iv.

65 Duncan, vii.

instance, Sor's and Carlevaro's methods provide the guitarist with clear technical and theoretical analysis of guitar techniques, while their works are too advanced for beginners. As a result, the instructor needs to have a comprehensive understanding and translate appropriate terms based on student's levels. The following chapters discuss sitting position, right-hand techniques, left-hand techniques, tension in the body, and the techniques associated with etudes by providing the reader with similarities and differences, guidelines, and relevance of nineteenth-century methods.

CHAPTER FOUR: SITTING POSITION

Shearer views good position as "the foundation of your technique development."[66] Carlevaro believes that sitting position is the most important starting point for teaching beginners.[67] He observes that a "poor" body position not only influences the movements of the fingers but also causes back and shoulder pain, saying: "A bad guitar position can harm the guitarist and, consequently, his music."[68]

What is a good sitting position? A good sitting position requires two basic concepts: security and freedom. Sor indicates that the guitarist's body should be in a stable and balanced position.[69] Carlevaro suggests that a better sitting position is needed to provide guitarists with stability and flexibility without affecting the balance of the guitar and freedom of movement.[70] Carlevaro states that "correct placement of the instrument would allow for the greatest freedom of movement in both low and high registers."[71] Shearer claims that an effective position involves secure, stable, and comfortable sitting procedures, free movement for both hands, and no counterproductive tension.[72] Duncan views good sitting position as providing guitarists with security and stability.[73]

The five methods include various approaches and different suggestions to aid the guitarist in achieving the proper sitting position (Romero does not discuss sitting position in his method).

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66 Aaron Shearer, *Learning the Classic Guitar*, 12.

67 Abel Carlevaro, *School of Guitar*, 2.

68 Carlevaro, 2.

69 Fernando Sor, *Method for the Spanish guitar*, trans. A, Merrick (New York: DaCapo Press, 1971), 10.

70 Carlevaro, 2.

71 Carlevaro, 3.

72 Shearer, 12.

73 Duncan, *Classical Guitar Playing*, 8.

Instead of copying a position from a method, the instructor's role is to observe individual differences and provide the appropriate approach. As students gain experience, their understanding will change, and they are able to explore the ways to adjust their body in a more comfortable position.

Sitting Position Similarities/Differences

By recognizing similarities, the guitarist is able to identify what techniques or positions are considered most important and efficient. Conversely, differences provide the guitarist with a range of choices.

Suggestions for the guitarist's body position

All authors believe that the shoulders should not hunch, and that the guitarist should keep shoulders and the spine straight. Sor illustrates the different sitting positions with an image (see figure 4-1).[74] The differences between the two positions are obvious, with the guitarist in the left picture keeping the shoulders in a straight line and the back in an upright position and the guitarist in the right picture supporting the guitar on the left thigh inclining the neck of the guitar parallel to the eyes. Sor states that the sitting position in the right picture causes tension in the left shoulder and blood circulation problems because of the height of the guitar neck.[75] Moreover, in this position, the guitarist must drop their right shoulder and right arm in an unnatural position to reach the strings, which impacts finger movement. Aguado mentions that the guitarist should sit straight without slumping and leaning forward.[76] Carlevaro indicates that the guitarist should keep the left and right shoulder as a straight line and should not push the

74 Sor, 10.

75 Sor, 11.

76 Aguado, 14.

right shoulder forward or upward to adapt the right hand (see figure 4-2).[77] Shearer claims that both shoulders should remain at the same level.[78] Duncan mentions that the spine should always remain straight and the shoulders should not be hunched. Moreover, the guitarist should relax the muscles of the neck, and move the body to the music without being rigid.[79]

Figure 4-1. The different sitting positions (Sor 1971, 10)

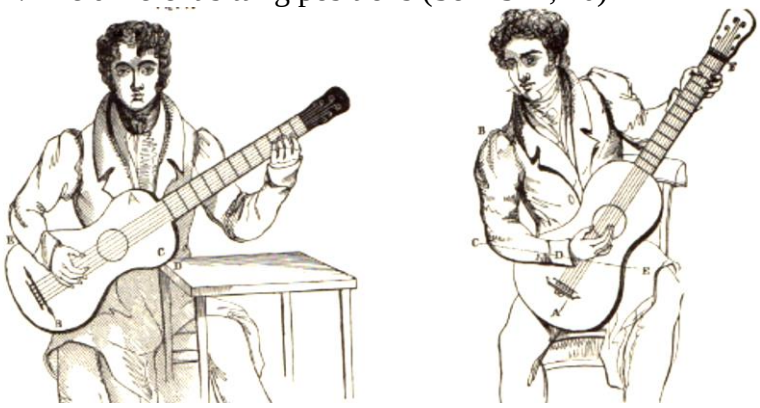
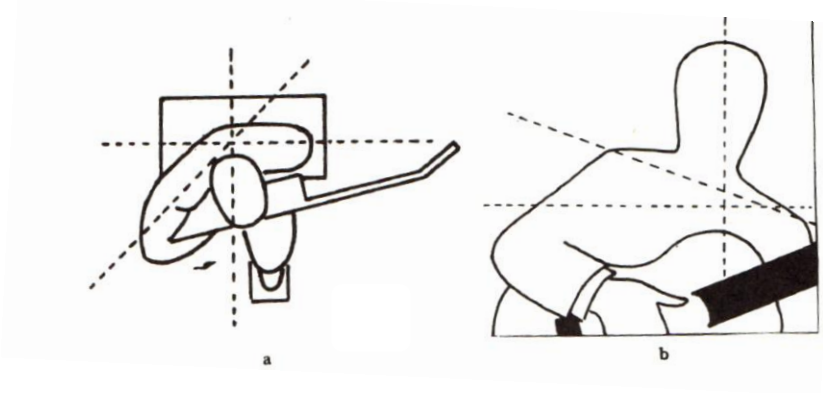


Figure 4-2. Poor sitting positions (Carlevaro 1984, 4)



77 Carlevaro, 3.

78 Shearer, 18.

79 Duncan, 11.

Suggestions for the guitarist's body position	
Sor	The right shoulder and hand should not be dropped. The left shoulder should not be lifted.
Aguado	1. The chest should be visible. 2. Sit straight without slumping and leaning forward.
Carlevaro	Left and right shoulder are a straight line and should not push the right shoulder. forward or upward to adapt the right hand.
Shearer	1. Face forward and sit straight at the edge of the chair. 2. Shoulders should be the same level.
Duncan	1. The position should not be held rigidly. 2. Do not hunch shoulder and relax neck.

Holding the guitar

There are three parts that will be discussed regarding holding the guitar: the position of the guitar-body, the height of the guitar-neck, and the direction of the guitar-head.

All authors suggest that the position of the guitar-body should be to the right of the torso. Sor says the 12th fret should be placed in front of the chest.[80] Aguado further mentions that the torso and the guitar body should form a slight angle. The left torso moves backward around 25 degrees, and the right torso has contact with the guitar-body.[81] Carlevaro suggests that the top curve of the guitar should never contact the left of the chest, which causes the right shoulder to fall forward.[82] Shearer claims that the sound-hole should lean on the right of the guitarist's torso, allowing the guitarist access to the first fret easily.[83] Although Duncan does not provide the guitarist with clear instructions, he indicates the guitarist should move the weight to the left, which results in the body of the guitar moving to the right of the torso.[84] All authors agree to the

80 Sor, 10.

81 Aguado, 14.

82 Carlevaro, 6.

83 Shearer, 18.

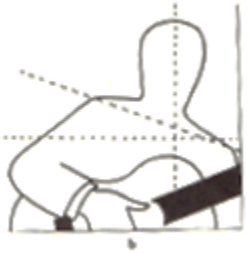
84 Duncan, 11.

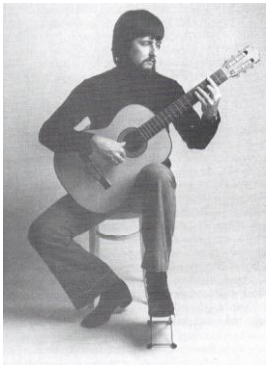
importance of positioning the guitar at the right of the torso. In this position, the guitar-neck is able to be closer to the guitarist's body. Therefore, the guitarist does not need to stretch the left arm to reach the 1st fret. Moreover, playing the barre chords in the lower frets will be easier if the guitar-neck is close to the body.

This agreement aside, these authors sometimes position the guitar in slightly different places. Through figures 4-3 and 4-4, one can find that they apply different contact points between the guitar and the chest, and that the positions of the sound-hole are different. Sor and Aguado place the entire guitar body to the right of the torso. Moreover, the contact point is on the right side of the torso and the sound-hole is close to the right waist (see figure 4-3). On the other hand, the illustrations in the Carlevaro, Shearer, and Duncan method books show the contact point is around the middle of the torso and the sound-hole is only slightly to the right (see figure 4-4).

Figure 4-3. The sitting positions (Sor 1971, 10; Aguado 1981, plate 1)

Figure 4-4. The sitting positions (Carlevaro 1984, 4; Shearer 1990, 12; Duncan 1980, 9)





The height of the guitar-neck influences the movements of the left and the right hands. The illustrations in these methods all show the guitar-neck as being angled up, with Aguado and Duncan providing the specific height of the guitar-neck. Aguado suggests that the angle of the neck be around 25 degrees from the ground,[85] while Duncan puts the height of the neck around 30–35 degrees[86]. Carlevaro and Shearer observe that guitarists may use different angles because of their physical differences, but that the height of the neck should provide both hands with maximum freedom.[87]

The direction of the guitar-head is also an important factor for allowing maximum freedom of the guitarist's left and right hands. Sor, Carlevaro, and Shearer conclude that the neck of the guitar should be positioned outward, while Aguado and Duncan believe that the neck should be positioned inward and close to the body.[88] This difference of opinion implies that the direction of the guitar head does not greatly affect the movements of both hands.

Holding the guitar	
Sor	1. 12th fret in front of the chest. 2. The head of the guitar: outward.
Aguado	1. Guitar body should be positioned right of the torso, and the base of the neck slightly to the left of the torso. 2. The torso and the guitar body should form a slight angle. 3. The neck of the guitar: 25 degrees. 4. The head of the guitar: inward.
Carlevaro	1. The top curve of the guitar should never contact with the left of the chest. 2. The height of the neck should provide the right hand with efficient strokes. 3. The head of the guitar: outward.
Shearer	1. Sound-hole should be around the right of the guitarist's torso. 2. The head of the guitar: outward.
Duncan	1. The weight of the body shifts to the left. 2. The neck of the guitar: 30–35 degrees. 3. The head of the guitar: inward.

85 Aguado, 14.

86 Duncan, 10.

87 Carlevaro, 5; Shearer, 17.

88 Sor, 11; Carlevaro, 4; Shearer, 16; Aguado, 14; Duncan, 10.

Guitar supports and contact points

Depending on the guitar support used, the guitarist will have different points of contact with the guitar. Sor uses a table to support the guitar, so the other contact points include the right knee and the right forearm.[89] Aguado suggests that the guitarist can use his "Tripod" invention (see figure 4-3) to enhance the sound quality and to stabilize the sitting posture. Aguado gives this invention several names: Tripódison, Tripod, and the Aguado device. The original name was Tripódison, but he used Tripod and Aguado device more frequently to avoid confusion.[90] A tripod is not only a supporting device but also a stand or carrier which is able to hold the guitar by itself without any assistance, so the chest does not lean against the guitar. The only contact points are the outside of the right thigh and the right arm.

Carlevaro, who uses a foot-stool, identifies four active contact points and one passive contact point. The four active contact points—the left leg, the right leg, the right arm, and the left hand—participate in holding the guitar firmly. Conversely, the passive contact point is the right side of the body, which is not used to hold the guitar.[91] Along the same lines, Shearer and Duncan both indicate the four contact points of the right thigh, the left thigh, the chest, and the right forearm.[92] Besides the table, the tripod, and the foot-stool, Shearer discusses other supportive devices, such as an A-frame. He mentions that this kind of guitar support allows the guitarist to rest the left foot on the ground, moving the guitar more to the right of their chest (see figure 4-5).[93]

89 Sor, 10.

90 Aguado, 3.

91 Carlevaro, 5.

92 Duncan, 8–10; Shearer, 19.

93 Shearer, 19.

Figure 4-5. Shearer's sitting position with an A-frame (Shearer 1990, 19)

Authors have different suggestions for the contact point between the chest and the body of the guitar, which may influence the sitting position. This contact point can be divided into an active contact point and a passive contact point. (These are different from Carlevaro's passive and active contact points.) The active contact point is inclining the torso forward and leaning the chest against the guitar. The passive contact point is bringing the guitar close to the body to lean on the chest. Sor does not mention the contact point between the chest and the body of the guitar. Aguado believes that the guitar does not need to lean against the chest. However, Aguado mentions that if there is any leaning, the guitar should move to the guitarist's body. He indicates that "the pupil must bring instrument and [the] tripod to him."[94] The body should keep straight without slumping forward, as the guitarist cannot keep the body straight when leaning. In other words, Aguado views the contact point as passive.

Conversely, Carlevaro and Duncan see this contact point as active. Carlevaro indicates that the guitarist should incline the torso forward and lean against the guitar when necessary. He states that "the contact point is established when the guitarist himself moves forward in performing attitude, and not because the guitar is made to lean against him."[95] Duncan also

94 Aguado, 14.

95 Carlevaro, 6.

indicates that the guitarist should lean into the instrument, saying, "to lean, keep your spine straight and incline your torso forward."[96] The reason for this difference may be due to the fact that these authors use different guitar supports, with Aguado using the tripod and modern authors using the foot-stool. The tripod is able to hold the guitar securely without any supports, while use of a foot-stool still requires at least three contact points—the left thigh, the right thigh, and the chest—to stabilize the guitar.

In addition, compared with the nineteenth-century methods, modern authors provide the guitarist with more specific instruction for sitting position, possibly due to the use of different guitar supports. For instance, Shearer suggests that the foot-stool be placed 8 inches in front of the chair, and that the height of the foot-stool be approximately 7 inches. The left foot should rest on the foot-stool and the left knee should point to the right. The guitarist should face to the front and sit straight at the edge of the chair; therefore, the right leg is allowed to support the lower back rim of the guitar.[97] However, Sor and Aguado only discuss the posture of the guitarist's body. Generally, the right thigh needs to counterbalance the force of the pressure from the left thigh when using the foot-stool. Sor positions the guitar on the table, which will not produce counter pressure to influence the stability of the guitar. Therefore, the guitarist only needs to position the lower concave curve of the guitar on the right knee without the support of the right thigh. Similarly, Aguado uses a tripod to support the guitar, as a tripod only requires the outside of the right thigh to slightly lean against the guitar. Unlike using the foot-stool, shifting the center of weight is not necessary when using a table or a tripod, because the guitar will not move

96 Duncan, 11.

97 Shearer, 13.

with the guitarist's body. Therefore, Sor and Aguado only include discussion of the posture of the guitarist's body.

Suggestions on the guitarist's body (contact points)	
Sor	Three contact points: the right knee, the weight of the right forearm, and the corner of the table.
Aguado	1. Using Tripod: contact points include outside of the right thigh and the right arm. 2. No Tripod: man–left thigh, woman–right thigh. The guitarist can choose whether lean against the chest.
Carlevaro	Five contact points: four are active and one is passive, including both legs, right arm, left hand, and the right chest.
Shearer	Four contact points: the right thigh, the left thigh, the chest and the right forearm.
Duncan	Four contact points: the chest, the top of the left thigh, the inside of the right thigh, and the right forearm.
Suggestions on the guitarist's body (the chest, the left leg, and the right leg)	
Sor	The left leg: not used. The right leg: supports the guitar.
Aguado	The chest: passive. The left leg: ladies can use a small stool (when using tripod). The right leg: (1) using tripod–outside of the thigh supports the guitar (2) without tripod–ladies rest the guitar on the right leg.
Carlevaro	The chest: active. The left leg: rest on the stool. The right leg: slightly backward.
Shearer	The chest: passive. The left leg: rest on the stool: point to the right. The right leg: lower the right thigh and support the lower back rim of the guitar.
Duncan	The chest: active. The left leg: towards to the front and grips the body of the guitar. The right leg: counterbalance to the left thigh.

Summary and guidelines

Every author has different opinions and suggestions about the sitting position. These various suggestions and opinions may be attributed to the differences in guitar-sizes, guitar supports, physical differences, learning background, or habits. However, one can find that the main cause of the difference is the use of guitar supports.

Using a guitar support is common these days, as supports provide the guitarist with better access for both the right and left hands. Moreover, the guitarist does not need to twist or cross one leg over the other when playing the guitar. There is no historical event that coincides with the first use of guitar supports, and most early illustrations show the performers supporting the instrument with crossed legs. Turnbull indicates that seventeenth-century guitarists used foot-stools as decoration rather than as support for the guitar (see figure 4-6).[98] However, according to the Renaissance painting shown in figure 4-7, one can still find a viola da mano player rests his right foot on the case to lift the instrument.[99] Moreover, figure 4-8 shows the sixteenth-century four-course guitarist rising her left leg to support the guitar.[100]

Figure 4-6.
The seventeenth-century guitarist (Turnbull 1974, plate 33)

Figure 4-7.
The Renaissance viola da mano player (Turnbull 1974, plate 7)

Figure 4-8.
The sixteenth-century four-course guitarist (Turnbull 1974, plate 18)

98 Turnbull, *Guitar from the Renaissance*, 143.

99 Turnbull, 140.

100 Turnbull, 141.

Sor may be the first to suggest the use of a supportive tool for the guitar, using a table to increase freedom and also to help the guitarist relax the left shoulder.[101] Aguado's "Tripod" invention reduces the contact points between the guitarist's body and the guitar, and it allows the sound of the guitar to vibrate longer.[102] However, the majority of contemporary guitarists use foot-stools for guitar support, with four modern methods discussing the sitting position with foot-stools.

Using the foot-stool to raise the left leg can be traced back to the nineteenth-century, specifically to Francisco Tárrega (1852–1909).[103] Aguado suggests that if the guitarist does not use the tripod, the male guitarist should place the guitar on the left thigh. The female guitarist should place the guitar on the right thigh. These suggestions have been discarded. Today, the majority of guitarists place the guitar on the left thigh. Carlevaro indicates that both males and females should use the same sitting position with the foot-stool. Furthermore, Shearer and Duncan all discuss the sitting position with the guitar on the left thigh. According to Turnbull, placing the guitar on the left thigh can trace back to the second half of the nineteenth-century.[104] He also observes that "the early nineteenth-century guitarists held the instrument in various way; on the right leg, on the left and generally with a ribbon."[105] Tárrega established this position, and his student Miguel Llobet (1878–1938) carried it forward.[106] Although there are few guitarists

101 Sor, 10.

102 Aguado, 7.

103 Turnbull, 106.

104 Turnbull, 145.

105 Turnbull, 145.

106 Turnbull, 106–107.

today who place the guitar on the right thigh, placing the guitar on the left or right thigh depends on physical differences or habits rather than gender.

Today, it is known that using foot-stools may cause some physical injury.[107] Some guitarists apply attachable supports or cushions to replace the foot-stool. Moreover, some guitarists combine the attachable supports or cushions with a foot-stool. Since there are so many options, the instructor should provide students with some guidelines of the pros and cons to help students find an appropriate support.

Foot-Stool

The foot-stool (see figure 4-9) is the most common guitar support today and was popularized by guitarists Tárrega and Segovia.[108] It provides the guitarist with a stable and secure position. The guitarist is able to change the height easily to adapt to different chairs.[109] However, the foot-stool may cause some physical problems, such as circulation, back, or neck issues, because the guitarist needs to place the left leg on the foot-stool for a long time. Furthermore, once the guitarist starts playing, it is hard to change the position.[110]

Figure 4-9. A foot-stool

107 Shearer, 19.

108 Daniel Nelson, "Buying a Classical Guitar Support," Classical Guitar 101, accessed February 28, 2018, http://classicalguitar101.org/classical-guitar-support.html#.WqKrYvnwaM8.

109 Daniel Nelson, "Buying a Classical Guitar Support."

110 Sehic, "The Conscious Guitarist," 76.

Attachable supports

Many contemporary guitarists have switched from the foot-stool to the attachable support (see figure 4-10) today. There are many kinds of attachable supports, such as Gitano guitar support, Kris Barnett guitar support, Murata guitar support, De Oro guitar support, ErgoPlay, and A-Frame. The differences between these supports are the materials that attach to the bottom of the guitar. For example, Gitano, De Oro, ErgoPlay, and A-Frame use suction cups, and Kris Barnett applies magnets to attach to the bottom of the guitar. Murata clamps at the bottom of the guitar.

Attachable supports not only provide the guitarist with better posture, but also reduce health problems. The guitarist is able to place the foot flat on the ground. The guitarist can also use the attachable support in combination with a foot-stool.[111] However, attachable supports may fall off the guitar unexpectedly. Some of attachable supports are bulky and hard to carry around.[112] In addition, suction cups may take the varnish off the guitar with time. Murata support needs to avoid clamping the guitar too tightly, which may damage the guitar.[113]

Figure 4-10. ErgoPlay guitar support

111 Sehic, 76.

112 Daniel Nelson, "Buying a Classical Guitar Support."

113 Bradford Werner, "Classical Guitar Support," This is Classical Guitar, accessed February 28, 2018, https://www.thisisclassicalguitar.com/ergonomic-guitar-rests-support-ergoplay/.

Cushion

Dynarette guitar support (see figure 4-11) keeps the guitar from slipping around. The design of the cushion helps the guitarist use proper position and a better angle of the neck. However, the cushion has limited adjustments. The guitarist needs to use a foot-stool with the cushion if the chair is too high. The cushion is also too big to fit in the guitar case.[114]

Figure 4-11. Dynarette guitar support (Cushion)

114 Bradford Werner, "Classical Guitar Support."

CHAPTER FIVE: RIGHT-HAND TECHNIQUE

While developing right-hand techniques, the guitarist may face issues such as insufficient accuracy, poor tone, harmful tension, or lack of speed. To avoid these issues, it is important for the guitarist to hold the right hand in the proper position and to move the fingers with efficient movements.

Right-Hand Technique Similarities/Differences

The right-hand position

Due to physical differences, there is no accepted correct or incorrect right-hand position. However, a proper right-hand position should satisfy two basic criteria. First, the right hand should be able to access all strings without extending fingers and causing muscular tension. Second, the fingers should be able to produce a clear tone without noises. To achieve these goals, the guitarist should determine their own contact points of the fingers. Since the arm, elbow, wrist, palm, and fingers are a unit, it is impossible to adjust one's position without influencing others'. As a result, the guitarist needs to consider the contact point of the arm, the height and the deviation of the wrist, the tilt of the hand, and the curvature of the fingers.

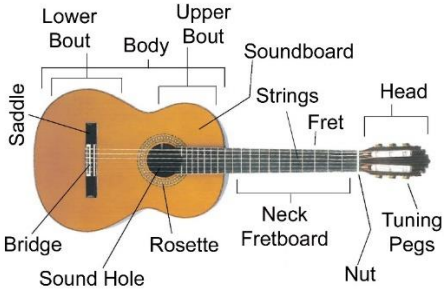
Contact points of the forearm

Aguado, Carlevaro, Shearer, and Duncan indicate that the forearm needs to be positioned on the front rim and the lower bout of the guitar.[115] Although Sor and Romero do not mention the position of the forearm, their illustrations show that their forearms rest at the same position as other authors. Every author applies different terms to describe the point of the guitar at which to

115 Aguado, *New guitar Method*, 15; Carlevaro, *School of Guitar*, 11; Shearer, *Learning the Classic Guitar*, 13; Duncan, *Classical Guitar Playing*, 11.

rest the forearm—the main convex of the guitar, upper side of the guitar, or the edge of the guitar—but these terms all indicate the front rim, which is the lower bout (see figure 5-1).

Figure 5-1. The name of guitar parts (Guitar Tips: Parts of a guitar 2015)



The placement of the forearm	
Sor	Does not mention the placement of the forearm. His picture shows the front rim and the lower bout of the guitar.
Aguado	On the main convex of the guitar. The weight of the arm should bring the guitar close to the body.
Carlevaro	Upper side of the guitar, and close to the upward extension of the bridge.
Romero	Does not mention the placement of the forearm. His picture shows the front rim and the lower bout of the guitar.
Shearer	The front rim of the lower bout of the guitar.
Duncan	On the edge of the instrument.

The difference between the methods is the contact point of the forearm. Sor specifically indicates that the contact point of the arm is the middle of the forearm.[116] Modern authors are more aware of individual differences; therefore, they suggest that the guitarist displace the forearm based on the right-hand position. Carlevaro indicates that the contact point needs to allow the fingers to stroke the string perpendicularly.[117] Romero and Shearer mention that the forearm contacts the guitar at various points depending on different strings, and these points

116 Sor, *Method for the Spanish guitar*, 11.

117 Carlevaro, 10.

should provide the fingers with maximum freedom.[118] Duncan suggests that the guitarist should avoid touching the guitar with the biceps.[119]

These differences imply that there is no strict regulation of the right forearm contact point. Every guitarist will place the forearm differently. In my teaching experience, the guitarist and instructor can apply three steps to determine the contact point of the forearm. First, the arm stays in its relaxed position with the fingers pointing to the ground and the palm facing the rear. Second, the guitarist lifts the forearm and moves it in clockwise position to rest on the front rim and the lower bout of the guitar. In this stage, the guitarist should allow the weight of the arm to rest on the guitar and the hand to stay in its relaxed position. The palm of the hand faces the soundboard. The third step is checking and adjusting the contact point by placing fingers *i*, *m*, and *a* on the 3rd, 2nd, and 1st string respectively. Normally, the contact point of the forearm is close to the elbow. If the contact point is close to the wrist, the guitarist needs to extend or straighten the fingers to reach the treble strings. On the other hand, if the guitarist uses the elbow joint to contact the guitar, the right hand will be too close to the fingerboard. This position limits the right-hand movement, while finger *p* may need to be extended to reach the 6th string. The right shoulder will be required to drop down to adapt this position. In short, the forearm position should ensure that the contact points of the fingers are correct, that there is freedom in the right hand, and that the shoulders are relaxed.

The contact point of the forearm	
Sor	The contact point is the middle of the forearm.
Aguado	Keep the elbow separate from the body.
Carlevaro	The contact point is located somewhere between the wrist and the elbow.
Romero	The contact point will change when playing different strings.
Shearer	Provide the right hand with free access to all the strings.
Duncan	Biceps should not touch the instrument.

118 Romero, *Classical Guitar Technique*, 23; Shearer, 13.

119 Duncan, 11.

The curvature of the wrist

All authors indicate that the wrist needs to be curved. Holding the wrist in an arched position enhances finger movement. Sor indicates that the curved wrist supports finger *p* by reaching the 3rd and the 6th strings without shifting the right hand,[120] while Aguado mentions that the appropriate arch of the wrist aids the guitarist in determining the curvature of the fingers.[121] However, the appropriate curvature is varied. Duncan claims that the appropriate curvature of the wrist depends on the individual's physical differences and musical requirements.[122]

The four modern authors provide instructions to determine appropriate curvature for each individual. Shearer suggests that the guitarist needs to bend the wrist in fully upward and downward positions to determine the most comfortable midway position (see figure 5-2).[123] Carlevaro, Romero, and Duncan apply the placement of finger *p* to determine the curvature of the wrist.[124] Carlevaro indicates that finger *p* should be held laterally, while Romero and Duncan further suggest the guitarist extend finger *p* in a 45-degree angle to the string. There is no correct answer to the degree of curvature; however, the guitarist should avoid over-bending the wrist. Duncan illustrates poor position of the wrist (see figure 5-3). He indicates that excessive curvature will over-extend finger *p*, and fingers will be positioned under the strings and cannot keep their curvature. Moreover, the wrist being raised for a long period of time may cause injury. On the other hand, Duncan mentions that if the guitarist flattens the wrist, it will impede the

120 Sor, 20.

121 Aguado, 170.

122 Duncan, 38.

123 Shearer, 34.

124 Carlevaro, 17; Romero, 22; Duncan, 39.

movement of finger *p*, and the trajectory of the stroking fingers may impede the adjacent strings.[125] To determine appropriate curvature, additional approaches are shown below:

The curvature of the wrist	
Sor	Curved.
Aguado	Curved.
Carlevaro	The procedure to determine the angle of the wrist: 1. The fingers rest on the string perpendicularly while lifting *p* laterally. 2. Gradually inclines the hand until it makes *p* lean against the string.
Romero	1. Place finger *p* laterally and form a 45-degree angle to the string. 2. The nail and the flesh of *p* should touch the string simultaneously.
Shearer	Bend the wrist in fully upward and downward positions to determine the most comfortable midway position.
Duncan	1. Make a fist, and then gradually uncurl the fingers to place them on the treble strings as if playing a chord. In the meantime, the guitarist can raise the wrist and push the hand forward to make the fingers gently curved. 2. Beginners: place a ping-pong in the palm to adjust the curvature of the wrist and fingers.

Figure 5-2. The wrist in a fully downward and upward position (Shearer 1990, 34)

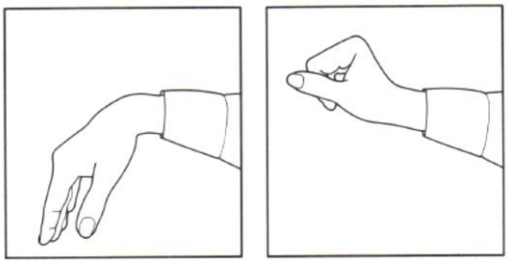
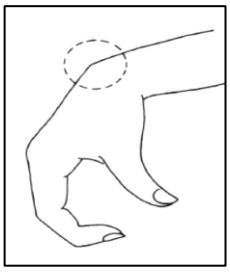


Figure 5-3. Poor positions of the wrist (Duncan 1980, 38)



The deviation of the wrist

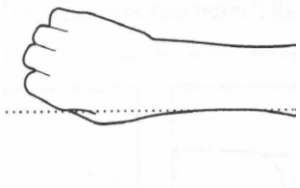
Deviation is turning the wrist to the left or right. Carlevaro slightly deviates the wrist to the right to keep the fingers perpendicular to the strings.[126] However, other authors have discussed how the wrist should be held in a natural position without deviations. In this position,

125 Duncan, 44.

126 Carlevaro, 14.

the knuckle of the middle finger will be the center of the wrist. Sor suggests that making finger *m* become the center of the motion when using finger *a*. However, in ordinary playing, Sor indicates that the wrist needs to be deviated to the left slightly, while the tips of the *p, i,* and *m* fingers can form a straight line and be parallel to the plane of the strings. Aguado believes that the entire hand is a unit, and the right-hand fingers and the forearm should maintain in a straight line. Therefore, the wrist should not have any deviations.[127] Romero indicates that the wrist should stay in its comfortable and natural position.[128] Shearer mentions that the wrist should stay in a straight line with the arm and the knuckle of *i* without deviation. To be more specific, he suggests that the knuckle of *m* should be the center of the wrist and forearm (see figure 5-4).[129] Duncan claims that, generally, the wrist should align with the arm except during special music-situations, such as playing harmonics or pizzicatos.[130]

Figure 5-4. The natural position of the wrist (Shearer 1990, 32)



Although Sor has different suggestions regarding the deviation of the wrist, he does state that the guitarist should hold the wrist in a natural position while using finger *a*. The use of finger *a* is a common and important technique today. If the guitarist deviates the wrist depending on the use of finger *a*, they will need to adjust the wrist several times within a piece. The motion of adjustment influences the security and stability of the right hand, and it may impede the finger

127 Aguado, 15.

128 Romero, 22.

129 Shearer, 34.

130 Duncan, 38.

strokes. Furthermore, deviating the wrist to the left or right may cause tension by stressing the tendons.[131] Frequently deviating wrist may also cause repetitive strain injury. The proper right-hand position should provide the tendons with maximum freedom without unnecessary tension. Therefore, the guitarists should hold the wrist in a natural position to allow the fingers to move freely.

The deviation of the wrist	
Sor	1. Deviated to the left. 2. Apply the nature position when using finger *a.*
Aguado	No deviation, because the entire hand is a unit.
Carlevaro	Slightly deviate to the right to keep the fingers perpendicular to the strings.
Romero	Stay in its comfortable and natural position.
Shearer	No deviation, stay in a straight line with the arm and the knuckle of *i*.
Duncan	No deviation, aligns with the arm.

The tilt of the hand

To provide fingers with smooth movement, the guitarist needs to adjust the tilt of the hand. Because the length of each finger is different, movements of longer fingers may be impeded by the string if the guitarist holds the palm parallel to the soundboard. The six authors all discuss the tilt of the hand; nonetheless, the modern authors depend on individual differences to provide the guitarist with more specific recommendations.

Sor recommends raising the right side of the hand and keeping the line A-B parallel to the plane of the strings (see figure 5-5).[132] However, Aguado argues that the hand should drop down the right side of the hand toward the little finger. Therefore, the inside of the fleshy parts of fingers *i* and *m* are able to stroke the strings efficiently.[133] The four modern authors provide the guitarist with several suggestions depending on physical differences. Carlevaro mentions that the

131 Hector Quine, *Guitar Technique: Intermediate to Advanced* (New York: Oxford University Press, 1990), 15.

132 Sor, 12.

133 Aguado, 169.

guitarist should gradually tilt the hand to the left to support finger *p* (see figure 5-6). Tilting the palm to the right impedes the movements of finger *a*.[134] Romero suggests that the guitarist tilt the hand to the right or left depending on lengths of *i* and *a*. He indicates that if *a* is shorter than *i*, the guitarist should position the right side of the palm lower than the left side. Conversely, if *i* is shorter than *a*, the left side of the palm should be close to the soundboard of the guitar. If the lengths of *i* and *a* are equal, the palm should be positioned parallel to the soundboard.[135]

Shearer believes that the palm should tilt to the left because the left corners of nails need to stroke the string.[136] He also states that in this position, the phalange of *a* can rest on the string perpendicularly to the soundboard (see figure 5-7).[137] Duncan suggests that the guitarist adjust the tilt of the hand depending on the length of finger *p*. If finger *p* is short, the hand should tilt to the left. If finger *p* is long, the hand should hold parallel to the soundboard, while finger *p* can extend more away from the fingers.[138]

Figure 5-5. Sor's right-hand position (Sor 1971, 12)

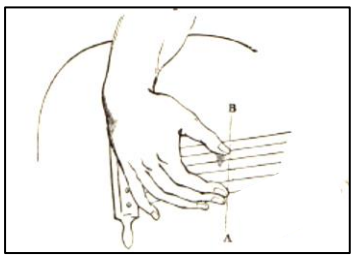


Figure 5-6. Avoiding dropping down the right side of the hand (Carlevaro 1984, 18)

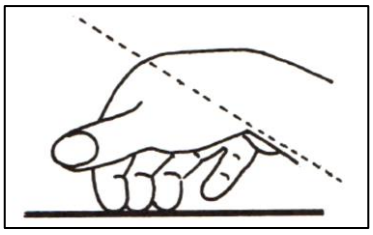
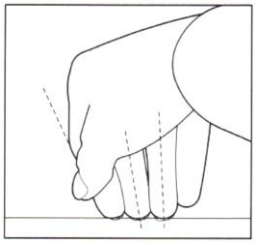


Figure 5-7. Tilting the hand to the left (Shearer 1990, 32)



134 Carlevaro, 18.

135 Romero, 22.

136 Shearer, 23.

137 Shearer, 35.

138 Duncan, 45.

The tilt of the hand	
Sor	Raise the right side.
Aguado	Drop down the right side of the hand.
Carlevaro	1. Do not drop down to the right side. 2. Tilt to the left to support the thumb.
Romero	1. *a*<*i*, right side lower. 2. *i*<*a*, left side lower. 3. *i*=*a*, parallel to the soundboard.
Shearer	Tilt the hand to the left.
Duncan	1. The thumb should hold 45 degrees to the string. 2. If the thumb is short, the hand should tilt to the left. 3. If the thumb is long, the hand does not need to tilt and the thumb can extend more away from the fingers.

The curvature of the fingers

Although all authors indicate that the fingers should stay curved, they have different preferences in degree of curvature. Sor mentions that the fingers should be slightly curved as the illustration shown in figure 5-5.[139] Aguado states that fingers should be well rounded but only slightly curved while applying nails.[140] Carlevaro believes that fingers *i* and *m* should be more curved than finger *a* (see figure 5-8).[141] Romero indicates that "all fingers should have the same curvature and the fingertips should be even."[142] Shearer mentions that the fingers should curve at their midway position, which can be achieved by placing the wrist in its midway position.[143] Duncan indicates that the fingers should be gently curved.[144]

139 Sor, 12.

140 Aguado, 10.

141 Carlevaro, 18.

142 Romero, 22.

143 Shearer, 34.

144 Duncan, 40.

Figure 5-8. The posture of finger *a* (Carlevaro 1984, 17)

Curving the fingers is necessary and important. When fingers stay in a relaxed state, they are naturally curved. Conversely, the guitarist needs to either spend extra force or over bend the wrist to hold fingers straight. Through authors' different suggestions, the guitarist can understand that the appropriate degree of curvature is different for each individual. However, it is important to ensure that the fingers can stroke a string without touching other strings, and the returning motion will not change the position of the fingers. To determine appropriate curvature of fingers, the guitarist can follow Romero's and Duncan's approaches, which are shown below:

The curvatures of the fingers	
Sor	Lightly curved.
Aguado	1. Rounded. 2. Slightly curved while using nails.
Carlevaro	Fingers *i* and *m* are more curved than finger *a*.
Romero	Every finger should have the same curvature, Two approaches:[145] 1. Gradually extend outward—the hand is too open when *i* is straighter than *m*; therefore, the guitarist should bring the fingers back until all fingers have the same curvature. 2. Make a fist tightly and then relax completely.
Shearer	Curved in their midway position.
Duncan	Gently curved—hold a Ping-Pong ball while placing the fingers on the strings to determine the proper curvature.

Summary and guidelines:

To finalize the right-hand position, the contact point of the forearm is located somewhere between the wrist and the elbow. The wrist needs to stay in its natural position without any deviations. Moreover, the wrist can immediately acquire the most natural and proper curvature

145 Duncan, 40.

after the forearm moves from the relaxed position to the edge of the guitar. The tilt of the hand should allow the nails and the pads of the flesh to touch the string simultaneously. Fingers stay in their natural curvatures without influencing flexibility.

Right-hand placement

The right hand can be placed at a variety of locations to create a wide range of tone color. However, Lee Ryan—the author of *The Natural Classical Guitar-The Principles of Effortless Playing*—indicates that if the guitarist changes the location of the right hand frequently, the color variations will become meaningless.[146] Therefore, the guitarist needs to establish a normal right-hand location to produce one basic tone color. The location is not only a normal mode of expression but also used for contrasting colors with others. Sor and Aguado both provide the guitarist with specific placement of the right hand. Sor places the hand at one tenth of the total length of the string from the bridge,[147] while Aguado positions the hand at six fingers from the bridge.[148] Duncan provides the guitarist with a vague description of the location, which is the back of the sound-hole toward the bridge.[149] Other modern methods do not discuss the location of the right hand, but through illustrations provided in each method book, the guitarist can find that they place the right hand near the right side of the sound-hole.

146 Lee Ryan, *The Natural Classical Guitar-The Principles of Effortless Playing*. (New Jersey: Prentice-Hall Inc., 1984), 126.

147 Sor, 15.

148 Aguado, 170.

149 Duncan, 36.

Summary and guidelines:

Although beginners do not need to consider these advanced techniques yet, it is important to help them to develop an optimal basic tone. Shearer says, "Poorly trained students produce a poor tone which is immediately evident during performance."[150] Every guitarist may have different opinions of the basic tone; however, most guitarists prefer mellow and warm tone-qualities.[151] Today, most guitarists follow Segovia's definition of natural voice or normal sonority of the guitar which is located at the edge of the sound-hole close the bridge.

Nails

Today, the majority of guitarists use a combination of the tip of the finger and the nail to stroke strings. However, Sor suggests that the guitarist should apply flesh only.[152] On the other hand, Aguado, Carlevaro, and Romero all indicate that the guitarist can use flesh only or a combination of nail and flesh. Aguado offers two situations in which one may play the guitar without nails: guitarists with long fingers or those stroking with finger *p*. He claims that if a guitarist uses finger *p* with flesh only, they should still use nails with fingers *i*, *m*, and *a*.[153] Similarly, Carlevaro and Romero both claim that the guitarist can use finger *p* with flesh only to produce the desired tone colors.[154] Romero further indicates that beginners should play the guitar without nails; therefore, their fingers can be more sensitive to the strings.[155] Shearer and Duncan only discuss playing the guitar with the combination the flesh and nails. Different than Romero's

150 Shearer, 21.

151 Shearer, 21.

152 Sor, 17.

153 Aguado, 10.

154 Carlevaro, 32; Romero, 26.

155 Romero, 44.

belief, Shearer claims that the beginner should start with nail-stroking as soon as the nails have grown.[156]

The use of the nail causes differences of the finger contact-points. Playing guitar with flesh only requires the guitarist to determine a point that allows the finger-tips to contact the string with a larger proportion. To do this, Sor turns the wrist slightly to the left. He indicates that the fingers are like hammers (sic) of the harpsichord, and they need to be positioned parallel to the strings.[157] On the other hand, playing the guitar with the combination of nail and flesh requires a point that allows the flesh and the nail to slide over the string smoothly. If the guitarist applies the middle part of the fingertip, there will be two points of contact between nail and string, which produces a tone lacking in clarity.[158] Aguado indicates that the guitarist needs to use the left side of the finger to contact the string.[159] Romero implies that every guitarist has a different angle of contact to the strings; nonetheless, the basic rule is that the flesh and the left corner of the nail both need to touch the strings during stroking (see figure 5-9).[160] Shearer claims that the tip and the middle phalanges of *a* need to be toward the soundboard in perpendicular direction. Because of the differences in length, *m* should be tilted to the left and *i* even more to the left.[161] Duncan indicates that the contact point of the normal stroke should be the left corner of the nail, and the stroking occurs at only one point. He further discusses

156 Shearer, 22.

157 Sor, 11.

158 Carlevaro, 33.

159 Aguado, 10.

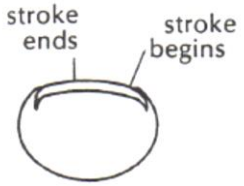
160 Romero, 23.

161 Shearer, 35.

changing the angle of the stroke to reduce scratchy noises for advanced guitarists.[162] Carlevaro suggests the guitarist contact the string at the center of the finger instead of the left corner.[163]

These different suggestions imply that the strokes should only occur at one point. Moreover, it reveals that the majority of guitarists prefer stroking the string with the left corner of the nail. Most guitarists use the left corner of the finger to stroke the string because nails can release easily when the stroke is from the left side of the nail.[164] Since the flesh and nail are much closer to each other at the left side of the finger, the finger can have better and smoother movements proceeding from the flesh to the nail. Moreover, using the left corner of the nail can produce darker and warmer sounds because of the larger surface area at the point where the finger contacts the string.[165]

Figure 5-9. The trajectory of strokes (Romero 2012, 23)



Although Aguado and modern authors all accept the combination of tip and nail, they have different suggestions regarding the priority of contacting strings. Aguado indicates that the flesh contact needs to precede the nail contact.[166] However, Aguado's approach is seldom used today. Duncan claims that Agaudo's approach will incorporate two impacts: flesh first, then nail. He suggests that the guitarist should position flesh and nail to contact the string simultaneously,

162 Duncan, 107.

163 Carlevaro, 49.

164 Ryan, 86.

165 Anthony Glise, *Classical Guitar Pedagogy–A Handbook for Teachers* (Pacific, MO: Mel Bay Publications, Inc., 1997), 34–35.

166 Aguado, 10.

even though some guitarists still break up a stroke into two phases.[167] Similarly, Carlevaro, Romero, and Shearer all believe that flesh and nail should contact the string simultaneously. Carlevaro believes that if flesh contacts the string early than nail, it will produce a staccato sound.[168]

Nails	
Sor	Flesh only.
Aguado	Flesh only or the combinations of nails and flesh. 1. Using the thumb without nails. 2. Long fingers do not need nails.
Carlevaro	Flesh only or the combinations–finger *p* usually strokes the string without nails.
Romero	Flesh only or the combinations–beginners do not need to use the nails.
Shearer	The combination of the nails and flesh. 1. The flesh should contact the string earlier than the nail. 2. Beginners should start playing guitar with the nails.
Duncan	The combination of the nails and flesh. 1. The flesh should contact the string earlier than the nail.

The contact points of the fingers	
Sor	Parallel to the string.
Aguado	Left side of the finger.
Carlevaro	Only one contact point: Hold the fingers perpendicularly.
Romero	1. Everyone has different angle of contact to the string. 2. The flesh and the left corner of the nail both need to touch the strings during stroking.
Shearer	1. Finger *a* needs to be perpendicular to the string. 2. Other fingers should follow the hand tilt to the left.
Duncan	1. Only one contact point. 2. Use the left corner of the nail.

Summary and guidelines:

The debate of playing guitar with nails or without nails has been ongoing for several centuries. Playing guitar with nails is the most common practice, starting as early as Aguado's

167 Duncan, 51.

168 Carlevaro, 35.

time.[169] Every method book has different suggestions about using nails in the beginning phase. No matter what method book is used, the instructor must avoid introducing two strokes for beginners at the same time. Regardless of using flesh only or the combination, the instructor needs to develop students' sensation of the fingers: understanding the tension of the string, the use of pressure, and the distance between the finger and the string. The lack of sensitivity is the principle cause of tension and impediment of developing right-hand techniques. The strengths of these two strokes are shown below:

Strengths of using finger nail	Strength of using flesh only
1. Duncan mentions that, "A fingernail itself can be considered a tiny lever. The more certain its contact, the more efficient its leverage."[170] 2. Produce a greater projection. 3. Maintain the same volume while increasing the speed. 4. Produce different gradations and sounds by changing the shape and length of nails or using different contact points of the nails.[171]	1. Provide the guitarist with sensitivity and sensation of fingertips. 2. Allow fingers to have better access to release the strings. 3. The guitarist does not need to worry about the quality of nails. 4. Avoid the noises caused by the friction of the nails. 5. Produce sweet and mellow gradations.[172]

Rest and free strokes

Rest and free strokes are the two basic strokes used in guitar playing. Rest stroke involves resting the active finger against the lower string after stroking, while free stroke is keeping the active finger away from the adjacent string after stroking. These two principle strokes produce different gradations of tone qualities. Rest stroke tends to produce thicker and warmer sounds, while free stroke tends to create thinner and lighter sounds. Therefore, guitarists usually use rest

169 Glise, 36.

170 Duncan, 40.

171 Glise, 37.

172 Glise, 126.

strokes for special accents.[173] Compared with rest stroke, the fingers are nimbler while using the free stroke. Free stroke is the primary stroke for the majority of notes, arpeggios, scales, and fast passages.

Sor and Aguado do not mention which strokes they use, and this issue has been debated for a long time. According to Sor's words and illustrations, some scholars believe that the parallel stroke is rest stroke. Tom Poore—an American guitar instructor—quotes Matanya Ophee's (the author of "The History of Apoyando") opinion in his article stating that Ophee indicates that if the guitarist follows Sor's illustration, it is impossible to avoid the stroking finger from hitting against the adjacent string.[174] Conversely, Poore argues that Sor does not mention which string he discussed. If the illustration indicates the 6th string, the assertion is undermined because there is no string lower than the 6th string. Moreover, Poore indicates that if the stroking movement comes from the middle joint or knuckle, the active finger can leave the string without hitting against the lower string.[175] Poore further discusses Sor's right-hand position: Playing rest stroke, the guitarist should lower their hand position. However, Sor only suggests the guitarist keep their right hands elevated in his method.[176]

In the introduction of *New Guitar Method*, editor Brian Jeffery indicates that Aguado discusses rest stroke in his Lesson 50.[177] In Lesson 50, Aguado suggests that the guitarist rest the finger on the 3rd string after sounding the 1st and 2nd strings. Similarly, Ophee believes that

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173 Ryan, 97.

174 Tom Poore, "Did Sor and Aguado Use Rest Stroke? A Closer Look at Matanya Ophee's 1982 Guitar Review Article 'The History of Apoyando'," *Tom Poore: Classical Guitarist*, accessed November 13, 2017. http://www.pooretom.com/Resources/Ophee.pdf.

175 Poore, 2.

176 Poore, 3.

177 Aguado, xviii.

Aguado's suggestion implies rest stroke.[178] Julio Gimeno García believes that Sor and Aguado employ the technique but they do not use the term "rest stroke."[179] On the other hand, Poore argues that Aguado does not provide the guitarist with clear explanations of the technique, and he only used rest stroke in limited situations. Therefore, one cannot confirm that Aguado used rest stroke.[180] Moreover, it is hard to tell whether this technique is a rest stroke in its modern sense. The guitarist should consider the relationship between this technique and modern rest stroke.

Today, guitarists use rest and free strokes frequently in every piece, while modern authors have different suggestions on this topic. Carlevaro indicates that the guitarist should only use free stroke. He claims that people who use rest stroke ignore the restraining mechanism, muscular aggregates (using the larger muscles to facilitate the smaller ones), and fijación (fixating certain joints of the fingers); therefore, they rely on the adjacent string to control the motion.[181] Romero, Shearer, and Duncan all discuss rest and free strokes in their methods. Duncan indicates that the hand positions of rest and free strokes are different. He mentions that the knuckle does not need to be vertical over the tip while using rest stroke.[182] On the contrary, Romero indicates that there is no real difference in the hand positions, the only difference between these two strokes is flexibility of joints of the finger.[183] Shearer believes that the only

178 Poore, 4.

179 Poore, 1.

180 Poore, 4.

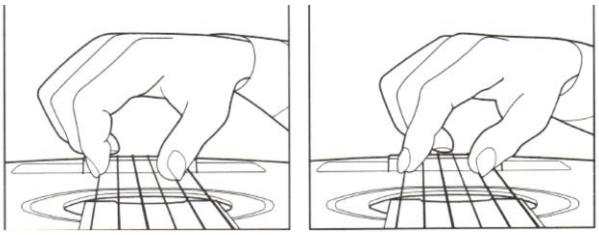
181 Carlevaro, 38.

182 Duncan, 36.

183 Romero, 42.

difference between strokes is the middle joint. The guitarist needs to straighten the finger while using rest strokes, and slightly curve the middle joint for free strokes (see figure 5-10).[184]

Figure 5-10. The positions of the free stroke and the rest stroke (Shearer 1990, 57)



Summary and guidelines:

Anthony Glise—the author of *Classical Guitar Pedagogy: A Handbook for Teachers*—provides the guitarist with two major schools of right-hand technique: Close Hand School and Open Hand School. Close Hand School, used by Segovia and his students, applies different right-hand positions for rest and free strokes. The right hand moves forward when playing free stroke, but rest stroke moves the right hand away from the floor.[185] The guitarist can find that Duncan belongs to the Close Hand School. Regarding the Open Hand School, the right-hand positions are subtly different. The only change is holding the finger straighter in rest stroke.[186] Therefore, the guitarist can place Romero and Shearer in Open Hand School. Through these varied suggestions, one can still explore commonalities. Changing positions is necessary. Since the alternation between these two strokes happens frequently and quickly, the guitarist needs to minimize the movement of changing positions.

184 Shearer, 56.

185 Glise, *Classical Guitar Pedagogy*, 26–27.

186 Glise, 29.

Rest & Free strokes	
Sor	Does not mention.
Aguado	Does not mention.
Carlevaro	Only uses free stroke.
Romero	Uses both strokes. Rest strokes: Slightly raise the wrist.
Shearer	Uses both strokes. Rest strokes: The finger is more straight. Free strokes: Slightly curve the middle joint.
Duncan	Uses both strokes. Rest strokes: The knuckle does not need to be vertical over the tip.

Stroking

Initial impulse and returning motion are two movements of stroking. Every author applies different terms to describe the motions of the stroking such as impelled tension and reaction,[187] impulse and restraint,[188] or execution and release.[189] Sor suggests that the stroking motion should be parallel to the soundboard; therefore, the reaction will not impede the acting string (see figure 5-11, right picture). If the finger moves vertically toward the soundboard (see figure 5-11, left picture), the vibrations of the active string would also take place in a perpendicular direction. When the reaction brings the finger to its original place, the finger will touch the string and stop the duration of the sound.[190]

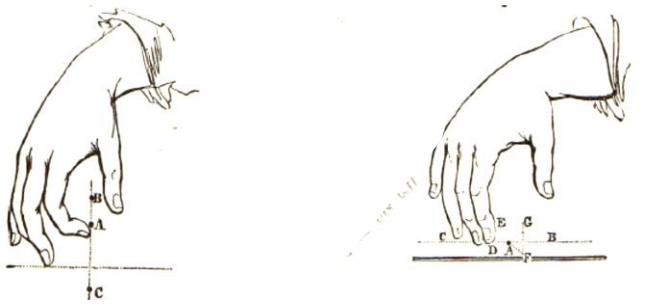
187 Sor, 14.

188 Carlevaro, 37–38.

189 Duncan, 64.

190 Sor, 14.

Figure 5-11. The trajectory of strokes (Sor 1971, 14)



Carlevaro indicates that the guitarists should apply fijación and muscular aggregates to complete restraint of movement and avoid the active finger from touching the adjacent string in returning motion. The returning movement should apply the same or even greater force than the impulse movement.[191] Romero mentions that the initial impulse not only makes the string vibrate, but it also brings the active finger back to the starting point. He explains that if the active finger is relaxed enough, it can follow a circular path to the original place on its own.[192] Duncan indicates that the stroking fingers should return to the original place with the same contraction of joints as in the beginning.[193]

Stroking direction impacts how the string moves. There are three stroking directions: pulling the string out (plucking), moving the string parallel to the soundboard, and pushing the string slightly inward to the soundboard. Using rest stroke or free stroke influences stroking direction; however, this section deals only with the general direction of string movement. Sor, Aguado, Carlevaro, and Shearer suggest that the guitarist move the string parallel to

191 Carlevaro, 37–38.

192 Romero, 23.

193 Duncan, 43.

soundboard.[194] Conversely, Duncan claims that the stroking motion is pushing the string slightly inward to the soundboard rather than plucking.[195]

Stroking	
Sor	1. Make the string vibrate in parallel direction to the plane of the sound-board. 2. Scratching. 3. Impelled tension & reaction.
Aguado	The fingers should face the palm after stroking.
Carlevaro	1. The direction of the moving string needs to be parallel to the soundboard. 2. No scratching: Perpendicularity of the trajectory of the fingers across a string. 3. Impulse & restraint.
Romero	Initial impulse & returning motion.
Shearer	Scratching motion.
Duncan	1. Push not pluck. 2. Preparation, execution, and release.

Summary and guidelines:

Returning motion is as important as the initial impulse, and every execution should be accompanied with a returning motion. The returning motion brings the stroking finger back to the original place and prepares the next stroke. Holding the finger without releasing the force is common among beginners. The returning motion is a trajectory of releasing the strength. If a stroke does not follow through a returning motion, it implies that the guitarist uses an unnecessary force to hold the finger. This force may cause the guitarist to spend extra effort to push back the finger. Moreover, it may also cause a stroking delay. Therefore, it is important that every guitarist pay attention to the returning motion. Speaking of stroking direction, the guitarist understands that plucking motion (pulling the string out) should be avoided.

194 Sor, 14; Aguado, 170; Carlevaro, 49; Shearer, 55.

195 Duncan, 43.

P-stroking

All six authors indicate that the direction of *p* stroking is opposite to the fingers and toward the floor. Finger *p* should form a cross with the tip of *i*.[196] The entire finger should be involved in stroking movements. Therefore, Aguado and Duncan suggest that the guitarist should bend the *p*-wrist joint and hold the rest of the finger still.[197] Shearer emphasizes that the *p*-tip joint should not be bent backward.[198] Similarly, Carlevaro claims that to enhance the *p*-movement, the guitarist should avoid bending the joints of *p* and fix the entire finger to use its muscular aggregate (see figure 5-12).[199]

On the other hand, authors have different arguments for the motion of finger *p*. Most authors, such as Carlevaro, Romero, and Duncan, agree that finger *p* should move in a circular motion.[200] Romero indicates that the circular motion can be divided in two movements: downward motion of stroking and upward motion of returning. The upward motion brings the active finger to the original position or to a new position.[201] Duncan illustrates the circular motion (see figure 5-13). Conversely, Shearer indicates that the guitarist should avoid circular motion, because it causes unnecessary tension.[202]

196 Sor, 15; Aguado, 15; Carlevaro, 30; Romero, 26; Shearer, 38; Duncan, 43.

197 Aguado, 15; Duncan, 45.

198 Shearer, 38.

199 Carlevaro, 30.

200 Carlevaro, 30; Romero, 27; Duncan, 43.

201 Romero, 27.

202 Shearer, 38.

Figure 5-12. The axis of movement and the muscular aggregate of finger *p* (Carlevaro 1984, 30)

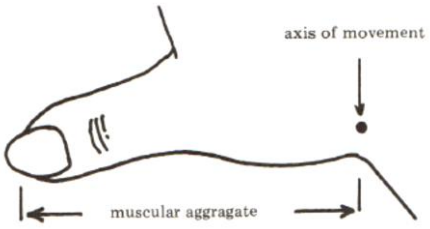
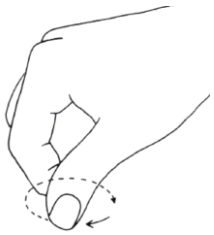


Figure 5-13. The outward circular motion of *p*-movement (Duncan 1980, 45)



***P*-Stroking**	
Sor	Opposite direction of the fingers and form a cross with finger *i*.
Aguado	1. Movement from the last joint and other parts of the thumb do not move. 2. Form a cross with finger *i*. 3. Bend the *p*-wrist joint.
Carlevaro	1. Opposite direction of the fingers and form a cross with finger *i*. 2. Move in a circular motion. 3. The trajectory should be perpendicular to the string.
Romero	1. Entire finger involves into the movement. 2. Move in a circular motion.
Shearer	1. Do not bend *p*-tip joint backward. 2. Avoid moving in a circular motion. 3. Lean against the tip of *i* after stroking.
Duncan	1. Movements form *p*-wrist. 2. Opposite direction with the fingers and lean against the tip of *i*. 3. Bend *p*-wrist joint backward. 4. Move in an outward circular motion. 5. Contact point parallel to the string.

Summary and guidelines:

Due to physical differences, some guitarists' *p*-tip joint can be bent backward but some guitarists cannot. However, the guitarist should follow *p*'s natural physiology rather than hold it firmly or spend extra strength on bending the joints. Although straightening finger *p* controls the way the nail goes over the string and thus control the tone quality, based on my teaching experiences, the beginner usually applies unnecessary tension. Therefore, whether or not the

guitarist can bend the other two joints backward to some degree, the guitarist needs to be aware that the *p*-movement comes from the wrist joint without the rest of the finger moving.

Additionally, based on my experiences, moving finger *p* in a circular motion is unavoidable. To prepare finger *p* to play further notes on the same string, a slight circular motion after the stroke is quite natural and helpful. If finger *p* returns the original position without the circular motion, the back of the finger will touch the active string. To avoid tension while moving in a circular motion, the guitarist needs to minimize this action. Unnecessary and complex movements will influence the speed of strokes, and it may cause a delay in strokes.

The use of finger *a*

As mentioned earlier, the use of finger *a* is a common and important technique, especially for producing soprano melodies. However, Sor and Aguado indicate that the guitarist should use finger *a* only for chords or arpeggios. Sor does so because the lengths of fingers are different, and it is hard to place all fingers in a straight line, especially finger *a*. He further demonstrates that bringing *a* to the line requires the guitarist to bend the wrist and lay down the right side in an uncomfortable and constrained position.[203] Therefore, he seldom uses finger *a*. Moreover, the other reasons are the quality of the tone and the physical condition. He indicates that finger *a* is weak and cannot move as fast as *i* and *m* because of the connections of nerves. Furthermore, compared with other fingers, finger *a* creates weak tones.[204] Similarly, Aguado prefers to use fingers *p*, *i*, and *m*; he suggests the guitarist use finger *m* in place of finger *a*.[205]

203 Sor, 11.

204 Sor, 45.

205 Aguado, 11.

Using finger *a* only for a limited situation is no longer applicable. From the modern point-of-view, finger *a* is as important as *p*, *i*, and *m*. Today, finger *a* is used for playing not only four-note chords and arpeggios, but also tremolo, artificial harmonics, and soprano melodies. Moreover, finger *a* plays a significant role in finger alternations. Some contemporary guitarists use alternations of *i*, *m*, and *a* or *p*, *i*, *m*, and *a* to enhance the speed of scales. Therefore, the four modern methods include various suggestions and approaches—as shown below—to enhance deficiencies of finger *a* and to improve further the movement of stroking.

The use of finger *a*	
Carlevaro	Pay more attention to practicing finger *a*.[206]
Romero	Practice full plant (positioning all fingers on the strings and play one finger at a time) and sequential plant (positioning the finger on the string when the previous finger is stroking the string). [207]
Shearer	1. Practice prepared-stroke when training *a*. 2. Pay attention to the flexion and follow-through of the middle joint of *a*.[208]
Duncan	Practice the preparation of finger *a*.[209]

The little finger

Sor indicates that resting the little finger on the soundboard not only supports the right hand but also stabilizes the guitar.[210] Aguado also uses the little finger to support the guitar, but he suggests that the guitarist move the little finger from the soundboard when using a tripod.[211] However, placing the little finger on the soundboard has been discarded by modern guitarists. Resting the little finger on the soundboard not only influences the nimbleness of other fingers,

206 Carlevaro, 18.

207 Romero, 25.

208 Shearer, 61–62.

209 Duncan, 64.

210 Sor, 33.

211 Aguado, 11.

but it also limits the movements of the right hand. Moreover, the position of the little finger influences the vibration of the sound. Therefore, modern methods all indicate that the guitarist should not rest the little finger on the soundboard. If the guitarist has the proper sitting position with a foot-stool or other guitar supports, he or she is able to hold the guitar securely and stably without the support of the little finger.

Inactive fingers

Inactive fingers are the fingers not involved in the stroking. Because of their physical proximity, some inactive fingers will move with the active finger. Shearer indicates that the inactive fingers should follow sympathetic movements and move with the active finger rather than be rigidly flexed or extended.[212] For instance, when fingers *i* and *m* (the active fingers) stroke the strings, finger *a* is the inactive finger and needs to move with *m*.[213] In addition, Shearer mentions that guitarists should view the fingers *a* and *c* (the little finger) as a unit and always move together.[214]

Sor, Romero, and Duncan have similar suggestions. Sor mentions that fingers *a* and *c* (inactive fingers) will move together when *i* and *m* (active fingers) play fast passages. Compared with the combination of *i* and *m*, the fingers *p* and *i* are more independent. In other words, the *m*, *a*, and *c* (inactive fingers) will not move when using the combination of *p* and *i* (active fingers). Therefore, to play fast passages, Sor suggests that the guitarist use more independent fingers, which are able to move without influencing others.[215]

212 Shearer, 50.

213 Shearer, 61–62.

214 Shearer, 54.

215 Sor, 33.

Romero indicates that finger *a* should move when fingers *i* and *m* alternate.[216] Duncan discusses simultaneous preparation, which is moving the inactive finger on the prepared position while the active finger is stroking. He claims that the inactive finger should not be held rigidly.[217] On the other hand, Carlevaro argues that every finger is independent. The inactive finger should be held steady without any movement; the active finger should not put the adjacent fingers in motion. He indicates that any movement of the inactive finger will impede the active fingers.[218]

Inactive fingers	
Sor	Use the combination of *p* and *i* to play fast passages.
Aguado	N/A (Not Applicable).
Carlevaro	Keep in complete repose.
Romero	Finger *a* should follow the movements of the *i-m* alternation.
Shearer	Follow sympathetic movement and move together.
Duncan	Simultaneous preparation-moving the inactive finger on the prepared position while the active finger is stroking.

Summary and guidelines:

From the modern point-of-view, every movement should follow the natural capacity of the individual guitarist's body. Likewise, every finger (no matter if inactive or active) is relaxed. Relaxation is not a complete lack of force, but the use of the appropriate strength. Sympathetic movement is an important concept that follows the natural capacity of the individual guitarist's body. If the guitarist holds the inactive finger gently, sympathetic movement will be triggered while the active finger is in motion. Carlevaro's suggestion seems to contradict natural physical movements. Since every finger is connected together by tendons, the guitarist needs to scatter the force to hold the inactive finger completely off. Again, there is no correct answer for this issue.

216 Romero, 43.

217 Duncan, 68.

218 Carlevaro, 50.

What is sure and needs to be considered is that the guitarist is holding fingers in their relaxed state.

Right-hand displacement

The displacement of the right hand allows the fingers to reach the required string easily without stretching. There are two ways to displace the right-hand position: Changing the contact point of the forearm and arching the wrist. Sor indicates that these two ways are applicable in changing strings.[219] Romero and Shearer believe that the guitarist should adjust the contact point of the forearm rather than arching the wrist to keep the angle of the stroke.[220]

On the other hand, Carlevaro and Aguado argue that displacing the right hand should not influence the contact point of the forearm. Carlevaro provides the guitarist with three displacements. The first two types are deviating and bending the wrist without changing the contact points of the forearm. He indicates that the contact point of the forearm is only adjusted while changing tone colors, such as sulla tastiero or sul ponticello effects.[221] Aguado believes that the guitarist should only adjust the curvature of the wrist without influencing the position of the arm.[222] These differences imply that displacing the right hand by moving the forearm or arching the wrist are two acceptable methods.

219 Sor, 22.

220 Romero, 23; Shearer, 53.

221 Carlevaro, 16.

222 Aguado, 7.

Summary and guidelines:

Another issue that can be discussed along with the topic of right-hand displacement is the angle of the strokes. Romero believes that the stroking angle on all strings should be the same.[223] Conversely, Duncan suggests that the guitarist should change the angle of the fingertips when playing different strings. He explains that the fingers should contact the string vertically when playing bass strings to reduce scratchy noises.[224] Although adjusting the angle of the strokes is a significant technique, it may influence the stability of the right hand. Therefore, the guitarist should not change stroking angles until they have acquired great certainty with the fundamental right-hand techniques. In addition, if the guitarist adjusts the contact point of the forearm when the fingers change strings, they can wear long sleeves or use an arm-glove to help the forearm move smoothly.

The right-hand displacement			
	Changing the contact point of the forearm	**Arching the wrist**	**Others**
Sor	Yes.	Yes.	N/A.
Aguado	No.	Yes.	N/A.
Carlevaro	Only adjusted while changing dynamic.	Yes.	Deviating the wrist while playing bass strings.
Romero	Yes.	No.	The stroking angle on the all strings should be the same.
Shearer	Yes.	No.	N/A.
Duncan	Undefined.	Undefined.	The fingers contact the string vertically when playing bass strings.

Fingerings

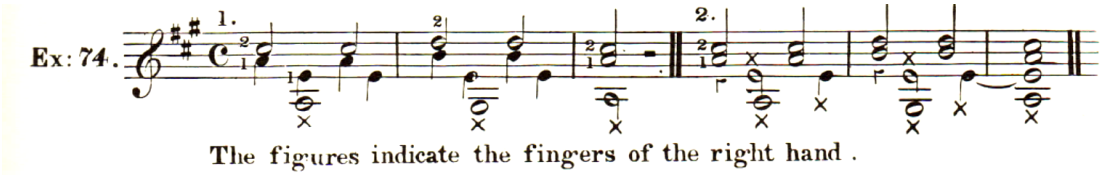
Sor and Aguado sometimes utilize the same right-hand finger to play consecutive notes. Sor mentions that the right-hand fingering should be considered not only by the amount and

223 Romero, 23.

224 Duncan, 107.

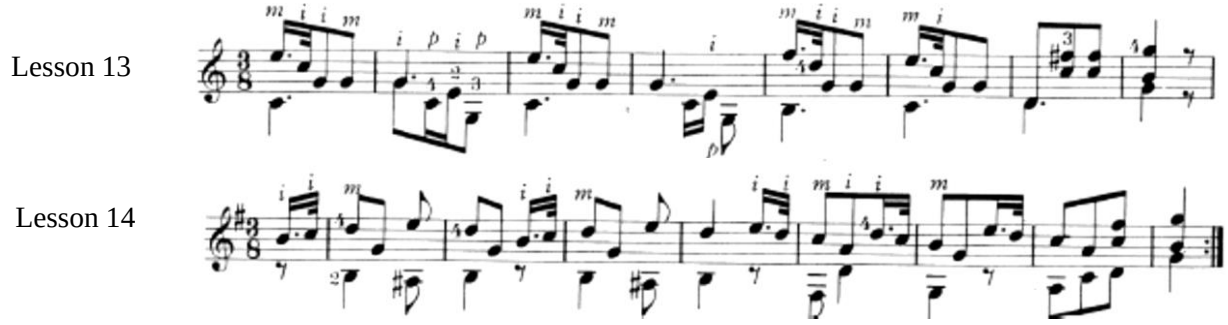
usage of the fingers but also by the gradations of the fingers. Therefore, he sometimes repeats the same finger in order to maintain the same gradations in a melodic line. In figure 5-14, Sor provides the guitarist with right-hand fingerings by using numbers and *x*. The lower *x* indicates finger *p*. In this example, the middle voice includes two notes: the 3rd string A4 and the 4th string E4. In exercise No.1, these notes are the harmony—not the melody—and E4 has the same value as A4; therefore, Sor passes *i* for both notes. In exercise No.2, since E4 is less important than A4, Sor applies finger *p* to play E4.[225]

Figure 5-14. Sor's example 74 (Sor 1971, plate XXI)



Aguado repeats the same finger when two notes are different values. According to Van Der Walt, Aguado may be trying to emphasize the dotted rhythm.[226] Through examples in his method, one can find that Aguado repeats finger *i* more than finger *m* (see figure 5-15).

Figure 5-15. Aguado's example in lesson 13 & 14 (Aguado 1981, 25)

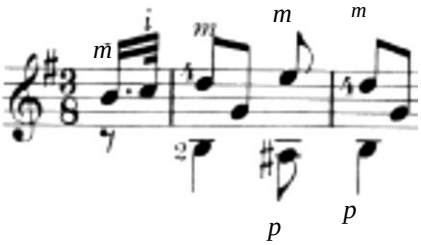


225 Sor, 33.

226 Van Der Walt, "The Relevance of The Teaching Methods," 77.

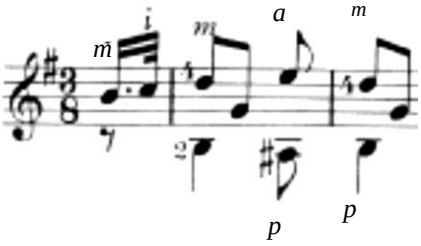
In addition to producing the same tone color, applying repeated fingerings could possibly be used to avoid the use of finger *a*. Since Sor and Aguado emphasize the use of fingers *p*, *i*, and *m*, repeating fingerings are inevitable. For instance, in the following example, if finger *m* plays the first note, the guitarist needs to use the same finger on the second beat of the m. 1 (A# and E) and the first beat of the m. 2 (B and D) (see figure 5-16).

Figure 5-16. Applied finger *m* (Aguado 1981, 25)



As discussed earlier, Aguado purposely avoids using finger *a*. However, if he were to utilize finger *a* in this example, he would avoid the repetition of finger *m*. The guitarist can apply *p* and *a* to play the second beat of the m. 1 (A# and E), and then use *p* and *m* to play the first beat of the m. 2 (B and D) (see figure 5-17). Moreover, in Sor's example 74, if the guitarist uses *m* and *a* to play the first beat and the third beats, using the same finger is not necessary because they can apply *p* and *i* for the second and the fourth beats.

Figure 5-17. Applied finger *a* (Aguado 1981, 25)



In addition, Aguado may apply rest stroke when he repeats the same fingering. In the 1st measure of the following example (see figure 5-18), C4 is on the 2nd string, and the first G4 is on

the 3rd string. After stroking C4, finger *i* rests on the 3rd string and strokes G4 simultaneously. Similarly, this issue can be solved by using finger *a*. The guitarist can arrange the fingering like figure 5-19.

Figure 5-18. The use of repeating fingerings (Aguado 1981, 25)

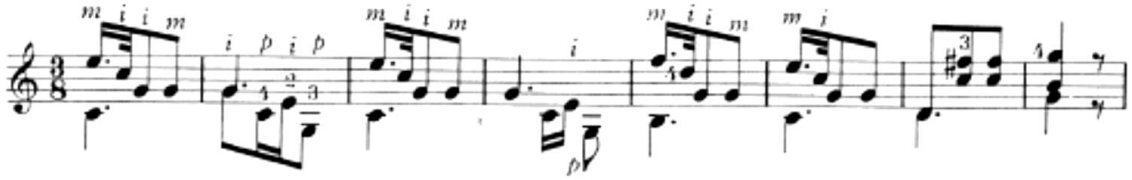
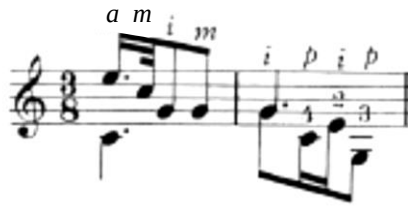


Figure 5-19. The use of finger *a* (Aguado 1981, 25)



My performing experiences suggest that repeating the right-hand finger affects speed, velocity, movements, and articulation of the fingers. Therefore, modern methods all emphasize alternating right-hand fingers to avoid using the same fingers on adjacent notes. Some editors change Aguado's original fingerings to enhance the right-hand movement. However, does this adjusted fingering follow the composer's original intention? Today, the guitarist is allowed to arrange the fingerings based on individual preference. Nonetheless, it is important for the guitarist to keep in mind the composer's original idea before adjusting the fingerings.

Gradation–Tone Color

Applying different gradations makes the music more vivid. Authors provide the guitarist with many techniques to produce a variety of tone colors, such as changing the placement of the right hand, adjusting the contact points of the fingers, using different strokes, modulating the resilience of the fingers, using different fingers, or playing a note on different strings.

Summary and guidelines:

It is necessary to "learn to walk before you run." Based on my teaching experiences, if the student needs to consider too many aspects of tone color while playing a note, they probably cannot complete a whole piece. Sor indicates that he does not think about changing gradations until he has grasp of basic fundamental technique.[227] Carlevaro organizes five toques—fixing different parts of the finger—to produce different levels of gradations. However, he suggests that beginners should only apply the basic stroking skill without considering any dynamic range.[228] Building a strong foundation allows the guitarist to produce desired effects efficiently; therefore, the instructor should teach the student progressively.

227 Sor, 18.

228 Carlevaro, 50.

CHAPTER SIX: LEFT-HAND TECHNIQUE

Compared with right-hand technique, the instructor is unable to supply much information on left-hand techniques for beginning-level students, because the function of the left hand is to press the string against the frets. Articulating and sounding these prepared notes are the right hand's responsibilities. In other words, some techniques do not need to be taught until they arise in the music. It is unnecessary to provide the guitarist with too much information at the fundamental level, because the student may misunderstand some instructions. Therefore, one finds that each author discusses different left-hand techniques, as shown below:

	Barre	**Slurs**	**Harmonics**	**Damps**	**Vibratos**
Sor	✓		✓	✓	
Aguado		✓	✓		✓
Carlevaro		✓		✓	✓
Romero	✓	✓	✓		✓
Shearer		✓			
Duncan	✓	✓			✓

Glise organizes left-hand techniques into three categories based on students' levels. Techniques for the beginners include positioning the left hand and pressing the strings. In the intermediate phrase, students need to learn position changing and shifting, barre, slurs, and vibratos. Advanced students should deal with artificial harmonics, advanced barre techniques (angle barre or hinge barre), and damps.[229] This dissertation focuses on only fundamental techniques; therefore, advanced techniques are not covered in this chapter. The following sections discuss left-hand techniques progressively by technique levels. The instructor can follow these guidelines to help the student develop left-hand technique sequentially; nonetheless, the

229 Glise, *Classical Guitar Pedagogy*, 247–248.

introduction of some techniques still needs to be in accordance with the student's level or learning status.

Left-Hand Technique Similarities/Differences

For the beginners: left-hand position

The left-hand thumb, fingers, wrist, arm, and elbow are all involved in left-hand movement while playing the guitar. The placement and posture of each are integrated. Therefore, it is important to divide the left hand into several small parts and discuss the position of each part specifically. The left-hand position may be varied in each method; nonetheless, the guitarist can study these differences to find which stance is most appropriate for them.

The left-hand thumb

The left-hand thumb does not participate in pressing the strings; however, it serves as a counterbalance to the left-hand fingers. The counterbalance not only stabilizes the left hand, but it also supports the left-hand fingers. In other words, because of the assistance of the left-hand thumb, the left-hand fingers are free to apply minimum pressure to press the strings. Aguado also indicates that the counter pressure allows the left-hand fingers to stay closer to the neck, and it strengthens finger-pressing to produce full and rounded sounds.[230] However, to achieve these advantages, the left-hand thumb should be held in a proper location and posture. Carlevaro mentions that the position of the thumb not only plays a significant role in the left-hand technique, but also influences the movements of the hand, the motor system, and the fingers. He

230 Aguado, *New guitar Method*, 11.

further claims that a good position can enhance mobility, freedom, distention, and contractions.[231] Different suggestions for placing the left-hand thumb are shown below:

The left-hand thumb position	
Sor	1. In the middle of the neck vertically. 2. Behind the 2nd finger. 3. Avoid gripping the neck of the guitar.
Aguado	1. Bend and rest the tip joint behind the 3rd and 4th fingers. 2. Rest at the opposite side of the 1st and 2nd fingers. 3. Slant, and the heel of the hand touches the neck. 4. Place behind the 1st finger while playing barre chords.
Carlevaro	1. Direct confrontation: always stay at the relative location to the fingers. 2. Indirect confrontation: place outside of the range of the four fingers.
Romero	Behind the 2nd finger.
Shearer	Between the 1st and the 2nd fingers.
Duncan	Behind the 2nd finger.

Sor and Aguado both provide the guitarist with clear instructions of the left-hand thumb position, and some of these positions are still used today, such as resting the left-hand thumb behind the back of the neck. However, some of the positions are discarded and modified. For example, Sor suggests resting the left-hand thumb midway on the back of the neck in line with the 2nd finger (see figure 6-1).[232] Conversely, modern guitarists adjust the placement of the left-hand thumb depending on the positions of the left-hand fingers. When the left-hand fingers are pressing bass strings, the left-hand thumb should rest approximately behind the 1st string. This position allows the left-hand fingers to acquire more space and flexibility. On the other hand, the left-hand thumb moves to the middle of the neck or stays behind the bass strings when the left-hand fingers play on the treble strings. In this position, the left-hand thumb can serve as a better counterbalance to make the left hand more stable.[233]

231 Carlevaro, *School of Guitar*, 71.

232 Sor, *Method for the Spanish guitar*, 14.

233 Vladimir Bobri, *The Segovia Technique* (New York: The Macmillan Company, 1972), 61.

Aguado bends and rests the tip joint of the left-hand thumb behind the 3rd and the 4th fingers (see figure 6-1).[234] This position is no longer applicable today. Modern authors suggest placing the left-hand thumb behind the 2nd finger or between the 1st and the 2nd fingers.[235] Bending the tip joint of the left-hand thumb not only limits the movements of the left-hand thumb, but also influences the motions of other fingers. Moreover, the guitarist may need to apply extra effort to shift the left-hand thumb while changing the position. Although the left-hand thumb does not need to participate in pressing strings, it needs to move with other fingers to provide better supports. Aguado suggests, in certain situations, that guitarists slant the left-hand thumb and the heel of the hand to touch the neck of the guitar (see figure 6-2).[236] This recommendation has been modified, as modern guitarists seldom slant the left-hand thumb behind the guitar-neck. They rest the left-hand thumb slanted and on the edge of the neck while playing a fret higher than the 12th position (the 13th fret to the 20th fret).[237] Carlevaro indicates, in this position, the left-hand thumb is able to pivot to help the left-hand fingers work independently (see figure 6-3).[238]

234 Aguado, 170–172.

235 Carlevaro, 65; Shearer, *Learning the Classic Guitar*, 46; Duncan, *Classical Guitar Playing*, 14.

236 Aguado, 4.

237 Carlevaro, 82.

238 Carlevaro, 82.

Figure 6-1. Aguado's left-hand thumb position (Aguado 1981, plate 9)

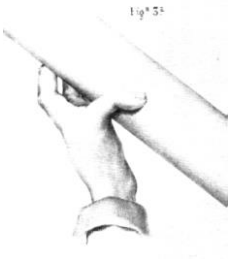


Figure 6-2. Aguado's left-hand thumb position (Aguado 1981, plate 2)

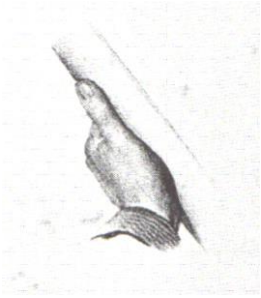
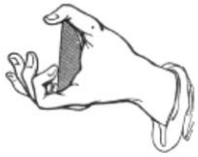


Figure 6-3. Carlevaro's left-thumb position on the 13th frets or higher frets (Carlevaro 1984, 81)

Applying the left-hand thumb to grip the neck and to press the strings should be avoided. Sor demonstrates that many guitarists hold the left palm to lean against the neck of the guitar. They apply the tip joint of the left-hand thumb and the knuckle of the 1st finger to grip the neck (see figure 6-4). Sor argues that this position impedes left-hand movement. Moreover, the guitarist cannot hold left-hand fingers perpendicularly, which may cause the left-hand fingers to touch and dampen the adjacent strings. In this position, the guitarist also needs to adjust their left hand and forearm when using the 2nd finger.[239]

Figure 6-4. Poor position of the left-hand thumb (Sor 1971, 12)



The left-hand thumb is generally rested at a point behind the neck between the 1st and the 2nd fingers; the guitarist can follow his or her individual flexibility, adjusting the left-hand thumb to the back of the 2nd finger if needed. Placing the left-hand thumb behind the neck between the 1st and the 2nd fingers can give more support to the 3rd and the 4th fingers than resting behind only

239 Sor, 12.

the 1st finger.[240] The guitarist can determine the location of the left-hand thumb by holding a pen at a horizontal level. The fingers only apply the minimum of pressure to hold the pen when the left-hand thumb stays at the opposite side of the 2nd finger. When the left-hand thumb gradually moves to the back of the 1st finger, the right side of the pen will move slightly downward. In this position, the guitarist will feel the 4th finger is strained because the 4th finger automatically gives the pressure to the pen to balance the pen to stay at the horizontal level. Furthermore, if the left-hand thumb is behind the 3rd or the 4th fingers, the wrist-joint of the left-hand thumb needs to bend in an unnatural position, which may increase unnecessary tension.

Left-hand fingers

All authors suggest that the guitarist press the strings perpendicularly; this will prevent damping the adjacent string.[241] Moreover, the force of the finger can be transmitted to the fingerboard directly. To achieve the perpendicular angle, the tip joints need to stand vertically to the fingerboard. The fingers should be curved and close to the fingerboard.[242] The guitarist needs to be aware of collapsing any joints, especially in the 3rd and the 4th fingers. Duncan indicates that the fingers will lose efficiency if there is any collapse in joints (see figure 6-5).[243] In addition, the fingers should press the strings close to the frets, but not overlapping them.

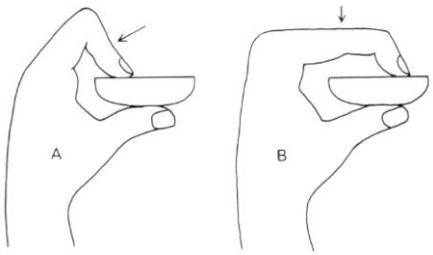
240 Quine, *Guitar Technique*, 43.

241 Sor, 13; Aguado, 17; Carlevaro, 73; Romero, *Classical Guitar Technique*, 49; Shearer, 46; Duncan, 15.

242 Sor, 13; Romero, 47; Shearer, 44; Duncan, 15.

243 Duncan, 15.

Figure 6-5. Collapse in joints (Duncan 1980, 7)



Before discussing the left-hand finger positions, the guitarist should understand fingerings. Depending on the placements of the fingers, all fingerings can be divided into two groups: the open position and the closed position. Open position is placing the fingers at different frets, while closed position is positioning more than one finger at the same fret. Authors apply different term to distinguish fingerings; the following chart organizes the use of different terms.

Authors	**Open position:** **Fingers at the different frets**	**Closed position:** **More than one finger at the same fret**
Carlevaro	Longitudinal presentation	Transversal presentation
Shearer	Little or no mobility	Requires considerable mobility
Duncan	Extended position	Close position

While playing open position, Sor, Aguado, Carleavro, Romero, and Duncan all agree that the left hand should be held parallel to the strings.[244] Modern authors provide the guitarist with more specific instructions. Carlevaro mentions that the fingertips should form a straight line parallel to the string.[245] Romero and Duncan demonstrate that the knuckle-line should be parallel to the strings.[246] Romero mentions that every finger should have an equal distance to each string.[247] Duncan further suggests that the guitarist should avoid tilting the hand to the left (see

244 Sor, 22; Aguado, 17.

245 Carlevaro, 65.

246 Romero, 47; Duncan, 15.

247 Romero, 47.

figure 6-6). Moreover, the 2nd and the 3rd fingers should serve as the center of the hand position, and the 1st and the 4th fingers need to naturally tilt inward and toward the center (see figure 6-7).[248] Conversely, Shearer argues that the knuckle of the 4th finger should be farthest from the fingerboard, while the knuckle of the 1st finger should be closest. In other words, the hand should tilt to the left (see figure 6-8).[249]

Figure 6-6. Inclining the fingers toward the left (Duncan 1980, 15)

Figure 6-7. The correct left-hand position (Duncan 1980, 15)

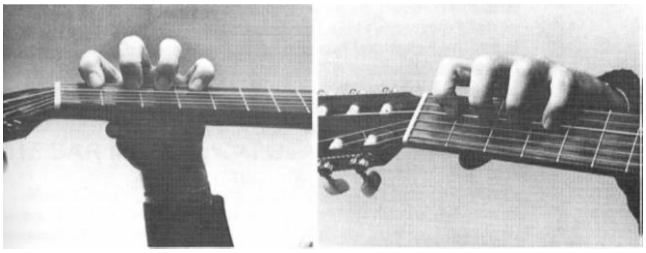
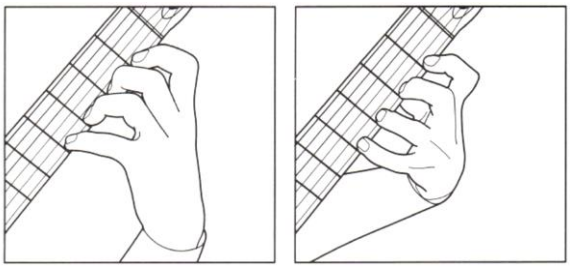


Figure 6-8. The left-hand position (Shearer 1990, 45)

Correct left-hand position Incorrect left-hand position



From my learning experiences, the majority of methods and modern guitarists believe that the hand should be parallel to the neck. Because the 4th finger is the shortest, tilting the hand to the left will create certain difficulties. For instance, the 4th finger cannot hold its natural curvature when reaching the bass strings. If the hand tilts to the right, the strength of the 1st

248 Duncan, 15.

249 Shearer, 45.

finger cannot transmit to the fingerboard directly while playing barre chords. Moreover, the 4th finger is unable to press the string perpendicularly. However, in some occasions, the hand is required to tilt to the right to support the 4th finger, such as when the 4th finger plays the bass string while other fingers play the treble strings. In this case, the guitarist not only tilts the hand to the right, but also drops the shoulder to avoid straightening the 4th finger. The left-finger position may need to be adjusted depending on varied fingerings and individual finger-length; however, it is important to maintain the curvature of the fingers and the contact point between the finger and the string.

The left-hand fingers in the open position	
Sor	The left hand should be held parallel to the strings.
Aguado	The left hand should be held parallel to the strings.
Carlevaro	The fingertips form a straight line, parallel to the string.
Romero	The knuckle-line should be parallel to the strings.
Shearer	The hand is required to tilt to the left slightly.
Duncan	1. The knuckle-line should be parallel to the strings. 2. Avoid tilting the hand to the left. 3. The 1st and the 4th fingers need to naturally tilt toward the center.

The wrist, the arm, and the elbow

While playing open position, Sor suggests that the guitarist should raise the elbow slightly and hold the arm perpendicularly to the neck. He believes that holding the arm too close to the body may reduce the degree of pressure applied. Moreover, in this position, the left hand will tilt to the left, which causes the left-hand fingers to not be able to press the string perpendicularly.[250] However, this recommendation has since been modified. Modern methods all suggest that the guitarist press the string perpendicularly but hold the arm close to the body. Carlevaro indicates that the guitarist needs to hold the elbow close to the body and avoid

250 Sor, 22.

touching the knuckle of the 1st finger to the neck.[251] Romero demonstrates that the left hand applies the weight of the arm to hang on the strings. In other words, the force of the arm is downward to the ground, and the elbow is close to the guitarist's body.[252] Shearer suggests that the elbow hang downward, the arm rotate inward, and the wrist be slightly arched.[253] Duncan provides the guitarist with specific numbers: the elbow should be held six to ten inches from the body while playing lower position. He further suggests that the guitarist should refrain from "winging" the arm.[254]

When the guitarist stays in a relaxed state, meaning that the muscles do not work to support the person in any way, the left-hand fingers should point to the ground. Raising the left hand to reach the neck exceeds the comfortable zone of the body. In other words, this position may easily create muscle fatigue. However, raising the left hand is unavoidable. Therefore, all authors suggest that the guitarist hold the elbow close to the body, which allows the guitarist to apply minimum effort to raise the left hand. If the elbow is held away from the body, the guitarist will expend unnecessary effort, which may cause tension and muscle fatigue over time. For example, placing the left hand on the guitar-neck is similar to carrying a heavy object. If the person keeps the arm and elbow away from the body to hold the object, they cannot carry it very long. Conversely, if holding the object close to the body, a person is able to apply less effort to accomplish this task.

251 Carlevaro, 64.

252 Romero, 49.

253 Shearer, 95.

254 Duncan, 23.

Aguado mentions that the elbow should slightly touch the guitarist's body.[255] However, this approach has been discarded today. His suggestion can be attributed to the use of the different guitar supports. A tripod holds the head of the guitar higher than the foot stool; therefore, slightly resting on the guitarist's body may save some effort. The other reason for placing the elbow against the guitarist's body is possibly due to Aguado's belief that the left arm does not need to be involved in the movements of the left hand. Conversely, modern methods believe that the entire left hand is a unit. The arm plays a significant role in supporting the left-hand fingers. For instance, when playing the bass strings, the arm needs to move out to support the left-hand fingers. If the guitarist applies Aguado's approach, they need to arch the wrist to reach the bass strings. Moreover, arching the wrist is also unavoidable while playing higher positions.

The open position: the wrist, the arm, and the elbow	
Sor	1. The elbow should not hide behind the guitar neck. 2. The forearm needs to be held perpendicularly to the neck.
Aguado	The elbow should slightly touch the guitarist's body.
Carlevaro	1. The elbow is held close to the body. 2. Avoid the knuckle of the 1st finger touching the neck.
Romero	1. The force of the arm is downward to the ground. 2. The elbow is close to the guitarist's body.
Shearer	1. The elbow hangs downward. 2. The arm rotates inward. 3. The wrist is slightly arched.
Duncan	The elbow should be held 6–10 inches from the body.

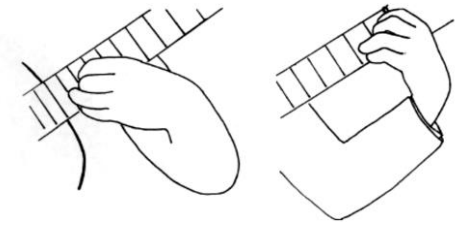
In close position, authors agree that the guitarist needs to hold the arm away from the body and adjust the position of the wrist to support the fingers. In this position, the left-hand fingers can keep their curvature and press the strings perpendicularly (see figure 6-9).[256] In

255 Aguado, 10.

256 Sor, 22; Carlevaro, 66; Shearer, 95; Duncan, 16.

addition, some guitarists may find it difficult to align fingers parallel to the fret. In this case, the guitarist can move a finger slightly toward the lower fret to give another finger more space. Commonly, the finger pressing on the lower strings will be closer to the lower fret.

Figure 6-9. The position of the wrist (Carlevaro 1984, 66)



Close position: the wrist, the arm, and the elbow	
Sor	Raise the elbow.
Aguado	N/A.
Carlevaro	1. The fingertips are parallel to the fret. 2. The thumb is held laterally. 3. The wrist follows the position of the fingers to adjust its curvature. 4. The arm should be held away from the body.
Romero	N/A.
Shearer	1. Arch the wrist. 2. Rotate the forearm. 3. Lean the knuckle of the 1st finger against the fingerboard.
Duncan	Apply the tip of the left-hand thumb and the elbow as pivots and rotate the arm out.

For the beginners: left-hand movement

Efficient movement is a significant aspect of left-hand technique. It requires that the guitarist use minimum energy to achieve maximum results. Moreover, it not only relates to the motion of the finger but also correlates with the degree of pressure applied. Understanding efficient movement helps the guitarist develop finger independence, enhance hand nimbleness, avoid unnecessary tension, and prevent unwanted noises.

The directions of pressing and releasing the string

As mentioned earlier, all authors suggest that the guitarist press strings perpendicularly. Similarly, the guitarist should move the active finger from the string upward without changing its position. Romero, Shearer, and Duncan all advise the guitarist to not push or pull the string, as changing the position of the string will fluctuate the pitch of the note.[257] Carlevaro indicates that the releasing finger may activate open strings because of the skin of the fingertip or finger friction.[258] Aguado mentions that if the fingers leave the strings diagonally, it will create unwanted noises.[259] To avoid these unwanted sounds, the authors suggest that the guitarist lift the finger perpendicularly. In addition, using a perpendicular motion when releasing the string is the most efficient movement. Superfluous motions may produce needless sounds, cause delay shifts, and even create unnecessary tension.

Releasing the string	
Sor	N/A.
Aguado	Avoid leaving the string diagonally.
Carlevaro	1. Lift the finger from the string perpendicularly. 2. The movement starts from the arm.
Romero	The string needs to be pressed and released straight into the fingerboard.
Shearer	The arm should not pull the active finger downward.
Duncan	The finger-lifting is small and without additional movements.

257 Romero, 49; Shearer, 46; Duncan, 120.

258 Carlevaro, 75.

259 Aguado, 32.

The use of pressure

Aguado, Carlevaro, Romero, Shearer, and Duncan indicate that pressing strings should apply minimum force. Aguado indicates that when the guitarist understands the use of left-hand pressure, they are able to produce good results.[260] Carlevaro claims that extra pressure influences the freedom and agility of the left-hand fingers. Moreover, it creates tension and causes muscle fatigue.[261] Romero mentions that "the way in which the pressure is applied is most important."[262] He indicates that the pressure of the left-hand fingers is supported by the weight of the arm. Shearer suggests that the guitarist should stop increasing the pressure when they are able to produce a clear tone. He indicates that excessive force should be carefully avoided.[263] Duncan believes that using the appropriate pressure not only strengthens left-hand movements but also improves left-hand position.[264]

For intermediate students: the adjustment and shift of positions

Adjusting and shifting positions are important aspects of left-hand movement. Adjusting position is when the left hand stays in the same position and only the fingers have lateral changes. Conversely, if the guitarist displaces the left hand to a new location, this motion is shifting. To accomplish a better position shift and adjustment, Carlevaro, Romero, Shearer, and Duncan indicate that the guitarist must visualize the new position, prepare the new fingerings, apply support from the arm, the wrist, and the elbow, and employ a guide finger if possible.[265]

260 Aguado, 32.

261 Carlevaro, 75.

262 Romero, 49.

263 Shearer, 46.

264 Duncan, 120.

265 Carlevaro, 74; Romero, 50; Shearer, 47; Duncan, 32–33.

However, Duncan's recommendation seems to be contradictory to efficient movement. Efficient movement requires the guitarist to minimize and simplify motions while adjusting and shifting positions. On the other hand, Duncan believes that applying either or both in-and-out movement and rotary movement achieves effortless shifting. He claims that when shifting the hand to a lower position, the guitarist should move the arm away from the body and then rotate the arm to bring the fingers to the new position.[266] Conversely, moving the hand to a higher position, the guitarist rotates the elbow in a clockwise circle and brings the arm close to the body.[267] If the guitarist practices position shifts with Duncan's suggestions, they will find that this needs to be reconsidered. In my own performing experience, unless one shifts from open position to close position or vice versa, displacing the hand should be simplified to one motion without any rotation. The guitarist needs to move the arm, the elbow, and the wrist together with the left-hand fingers as a unit and remain parallel to the fingerboard when moving. With this movement, the guitarist is able to avoid unnecessary tension, simplify complex motions, and reduce performing mistakes.

Shifting positions	
Sor	N/A.
Aguado	N/A.
Carlevaro	1. Arm involvement. 2. Three ways: by substitution, by displacement, and by jump.
Romero	1. Well prepared fingers but also eyes and the mind. 2. See the placement of the new chord. 3. Imagine the shape of the hand. 4. Hold the fingering before arriving the new position.
Shearer	See the new position before moving the hand.
Duncan	1. Visualize the new formation. 2. Apply guide fingers if possible. 3. Employ the arm and the elbow. 4. Arm movements: in-and-out movement and rotary movement.

266 Duncan, 22.

267 Duncan, 23.

For intermediate students: special techniques

Barre

Barre technique is applying the 1st finger to press two or more strings at the same time. Compared with other techniques, the barre technique is quite difficult. Therefore, authors provide the guitarist with recommendations to play barre technique efficiently. When playing barre technique, Sor and Aguado demonstrate that the left-hand thumb moves to the back of the 1st finger, and that this method is still effective.[268] Romero further expands on this approach, suggesting the guitarist place the left-hand thumb in the center of the left hand if using other fingers to play a barre chord.[269]

In addition, Sor advises the guitarist to apply appropriate pressure rather than squeezing the neck of the guitar while playing barre technique. He suggests that the guitarist should not force the entire finger to squeeze all points of line A-B (see figure 6-10). The left-hand thumb should lean against the neck without any force. The 1st finger presses point B first. Then, when the left-hand thumb moves toward point A, the 1st finger will be pulled down to line A-B.[270]

Figure 6-10. The left-hand position while playing barre (Sor 1971, 14)

268 Sor, 23; Aguado, 40.

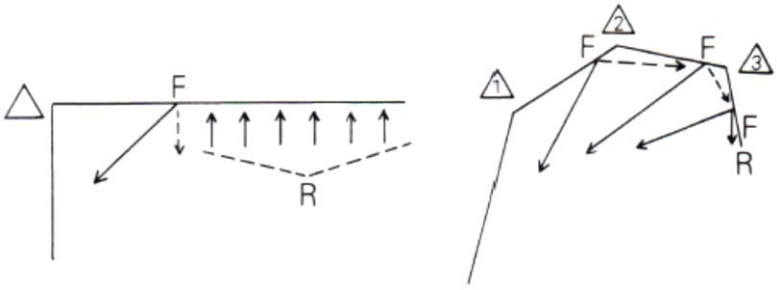
269 Romero, 52.

270 Sor, 14.

Duncan strengthens Sor's concept and provides the guitarist with the procedure to apply leverage in barre technique. Duncan indicates that the guitarist should curve the 1st finger when playing barre chords. If the 1st finger is curved, the joints can serve as subsidiary fulcra and increase the force more directly to the string (see figure 6-11).[271] Duncan provides the guitarist with some suggestions to achieve efficient barre position: applying partial pressure, using the left side of the finger, avoiding extra movements, and trying half barre (pressing two or three strings) if possible. Duncan indicates that if the next chord requires a six-string barre, the guitarist should use a full barre to avoid the extra movements. To reduce the noise produced by the dead space on the finger, the guitarist can consider using a larger barre to resolve the problem. When applying the half barre (pressing two or three strings), the guitarist should bend the active finger. Duncan says that the bent finger benefits the movements of the 3rd and the 4th fingers (see figure 6-12).[272]

Figure 6-11. The use of leverage in the barre technique (Duncan 1980, 17)

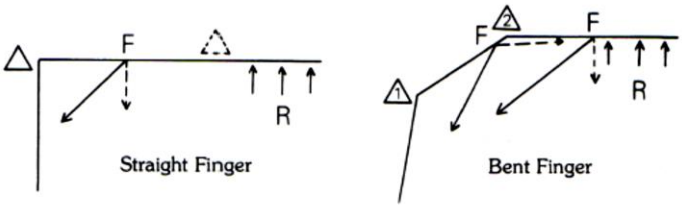
(Triangles indicate fulcrum; F indicates force; and R indicates resistance)



271 Duncan, 17.

272 Duncan, 16.

Figure 6-12. The position of playing the half barre (Duncan 1980, 19–20)



Summary and guidelines

Playing barre technique, the guitarist should understand the distribution of force along the finger. In other words, the guitarist should be able to disperse the pressure to the necessary phalange instead of squeezing the strings. Once again in my experience, the guitarist can practice in three steps to enhance barre technique: (1) knuckle-phalange presses on the 1st and 2nd strings; the middle- and the tip-phalanges should be able to move freely at this time, (2) the tip-phalange presses the 5th and the 6th strings, creating an arc in the middle of the finger, and (3) the guitarist needs to gradually press the arc and make the middle-phalange touch the 3rd and the 4th strings. Following these three steps, the guitarist will learn how to control the distribution of pressure.

Barre	
Sor	Avoid squeezing the neck of the guitar.
Aguado	1. Move the left-hand thumb behind the 1st finger. 2. Flat the 1st finger and use the side of the finger. 3. Avoid left-hand fingers flatting, crushing, or leaning against the 1st finger.
Carlevaro	N/A.
Romero	1. The left-hand thumb and the 1st finger should apply the equal pressure. 2. The middle and the tip joints should be held firmly.
Shearer	N/A.
Duncan	1. Apply partial pressure. 2. Use left side of the finger. 3. Avoid extra movements. 4. Try small barre if possible.

Slurs

Slur technique is a left-hand articulation, which includes ascending slurs and descending slurs. Different combinations of slurs can produce appoggiaturas, mordents, or trills. Sor does not mention slur technique in his method. Other authors indicate that the fingers should serve as a hammer and drop to the string when playing ascending slurs. Compared with the ascending slurs, the descending slurs present certain difficulties, because the movement of the active finger may influence the adjacent string. Aguado indicates that the higher finger pulls the string away, and it needs to be held loosely and well positioned.[273]

To avoid touching the adjacent string, modern authors emphasize the trajectory of the active finger. Carlevaro, Romero, and Duncan demonstrate that the higher finger pulls the string and moves parallel to the fingerboard.[274] Similarly, Shearer also indicates that the active finger moves parallel to the fingerboard when playing the rest slur and the brush slur. He further discusses the free slur, which is moving the active finger outward.[275]

Although these authors all indicate that the higher finger should move parallel to the fingerboard, they have different suggestions to break the motion of the active finger. Carlevaro suggests that the guitarist apply frijación to stop the active finger or employ the left arm to bring the hand upward and away from the fingerboard.[276] He believes that the guitarist should avoid using the adjacent string to stop the finger. However, Shearer indicates that the guitarist can lean the active finger against the adjacent string while playing the rest slur, and apply an inactive

273 Aguado, 35.

274 Carlevaro, 115; Romero, 51.

275 Shearer, 98.

276 Carlevaro, 114–115.

finger to dampen the string when using the brush slur.[277] Duncan also mentions that the active finger needs to touch the next higher string after plucking the string, and then moves upward from the fingerboard.[278]

Summary and guidelines

The instructor can use letters from the English alphabet to help students have a clear understanding of the finger movements. When playing descending slurs, the active finger pulls the string upward and outward, and the direction of the movement should form the letter J. The finger pulls the strings when it moves to the bottom of the letter J. For a guitarist playing descending slurs for the first time, they can move the finger in a horizontal J. In other words, after pulling the string, the finger touches the adjacent string, and then relaxes upward and away from the fingerboard. Pulling the strings requires the finger to move fast and at an exact moment. Other fingers should hold still without moving the string.

Descending slurs	
Sor	N/A.
Aguado	The higher finger needs to be held loosely and well positioned.
Carlevaro	1. The higher finger frictions the string and moves parallel to the fingerboard. 2. Avoid using the adjacent string to stop the finger.
Romero	The active finger moves parallel to the fingerboard.
Shearer	1. The active finger moves parallel to the fingerboard when playing the rest slur and the brush slur. 2. The free slur moves the active finger outward. 3. The guitarist can lean the active finger against the adjacent string or apply an inactive finger to dampen the string.
Duncan	The active finger moves parallel to the fingerboard to rest on the next higher string, and then moves upward from the fingerboard.

277 Shearer, 98.

278 Duncan, 28.

Vibrato

Vibrato is a technique enhancing the expressive possibilities of the guitar by changing the fluctuation in pitch.[279] Moreover, Aguado indicates that vibrato increases the duration of the sound.[280] There are two kinds of vibrato: horizontal and vertical vibratos. Horizontal vibrato is moving the left arm side to side between the nut and the bridge, while vertical vibrato is moving the string back and forth between the 6th and the 1st strings. The authors apply different terms to label them, which are shown below:

	Move the left arm side to side between the nut and the bridge	***Move the string back and forth between the 6th and the 1st strings***
Carlevaro	Longitudinal vibrato	Transversal vibrato
Romero	Horizontal vibrato	Vertical vibrato
Duncan	Lateral vibrato	Lateral-bend vibrato

Horizontal vibrato is usually used above the 4th fret (the 4th fret to the 20th fret), and it is used more frequently than the vertical vibrato. Aguado suggests that the guitarist apply the weight of the left hand and arm to move the pressing finger side to side without the supporting of the left-hand thumb.[281] Correspondingly, Carlevaro and Romero both mention that the left-hand thumb does not need to be involved in the motions.[282] Duncan argues that the left-hand thumb should slightly rest on the neck without any pressure.[283] Speaking about the movements of

279 Duncan, 90.

280 Aguado, 53.

281 Aguado, 53.

282 Carlevaro, 95; Romero, 51.

283 Duncan, 92.

the left hand, Aguado, Carlevaro, Romero, and Duncan all believe that the motions for horizontal vibrato should begin from the arm.[284]

On the other hand, notes below the 4th fret (the 1st fret to the 4th fret) are more difficult to vibrate; therefore, the guitarist may apply vertical vibrato to push and pull the string back and forth. Aguado does not discuss vertical vibrato in his method, while Carlevaro indicates that the movement originates at the finger itself.[285] Romero and Duncan further claim that the motion starts from the middle joint.[286]

Vibrato	
Aguado	Horizontal vibrato: The motion should start from the arm, and the left-hand thumb does not need to involve into the motions.
Carlevaro	Horizontal vibrato: The motion should start from the arm, and the left-hand thumb does not need to be involved in the motions.
	Vertical vibrato: The movement originates at the finger itself.
Romero	Horizontal vibrato: The motion should start from the arm, and the left-hand thumb does not need to involve into the motions.
	The vertical vibrato: The movement originates at the finger itself and starts from the middle joint.
Duncan	Horizontal vibrato: The motion should start from the arm, and the left-hand thumb should slightly rest on the neck without any pressure.
	Vertical vibrato: The movement originates at the finger itself and starts from the middle joint.

284 Aguado, 53; Carlevaro, 95; Romero, 51; Duncan, 92.

285 Carlevaro, 96.

286 Romero, 51; Duncan, 93.

CHAPTER SEVEN: TENSION IN THE BODY

Tension in the Body Similarities/Differences

Tension in the body is a critical issue today. Many guitarists have suffered serious muscular injuries because of inadequate tension. In "Case Study: Musicians' Playing-Related Injuries," the authors indicate that "professional and student musicians are at high risk of acquiring a playing-related injury at some point in their careers."[287] Christine Guptill and Christine Zaza, authors of "Injury Prevention: What Music Teachers Can Do," estimate that the rate of playing-related injuries ranges from 26–93 percent.[288]

The guitarist will find that Sor only briefly mentions tension and blood circulation when he discusses poor sitting positions. Aguado does not speak on the topic. However, modern methods include one or more chapters to help the guitarist understand tension in the body. Moreover, authors provide the guitarist with supportive approaches and exercises to resolve tension. They also reveal the reasons behind these problems and some possible solutions to prevent them.

	Problems
Sor	1. Blood circulation. 2. Tension.
Aguado	N/A.
Carlevaro	1. Tension. 2. Muscular fatigue.
Romero	Tension.
Shearer	1. Counterproductive tension. 2. RSI. 3. Shoulder pain.
Duncan	Dysfunctional tension.

287 Christine Guptill and Matthew Bruijn Golem, "Case study: Musicians' Playing-Related Injuries," *Work IOS Press* 30, (2008): 307.

288 Christine Guptill and Christine Zaza, "Injury Prevention: What Music Teachers Can Do," *Music Educators Journal* 96, no. 4 (2010): 28-29.

Causes

There are various causes of tension. In the study "Playing-Related Injury in Guitarists Playing Popular Music," the authors survey 261 guitarists. The results show that the causes of tension and injuries include "poor technique, inadequate supports, bad posture, or overuse/misuse."[289] In "Flamenco Guitar as a Risk Factor for Overuse Syndrome," the authors indicate that some guitarists subconsciously increase the amount of tension while attempting to increase their volume and speed.[290]

Carlevaro believes that practicing without proper form and technique will produce poor results. In other words, "practice makes perfect" is not always true. Carlevaro indicates that many instructors believe if their students can practice more, they are able to achieve better results. However, numerous hours of practice without proper instruction creates negative habits, and further causes tension and muscular fatigue. Deficient knowledge of techniques, inefficient movements, and ignoring muscle function may affect the guitarist's future performance. Some guitarists may suffer serious muscular injures, and some may need to redevelop fundamental techniques. Carlevaro says, "In the long run, negative habits will develop, habits that can turn into an almost insurmountable barrier that would stand in the way of the redevelopment of the well-intentioned instrumentalist."[291] Romero mentions that if the guitarist does not have sensitive kinesthesia of muscles, tension is easily created and ignored.[292]

289 John L. Rigg, Randy Marrinan, and Mark A. Thomas, "Playing-Related Injury in Guitarists Playing Popular Music," *Medical Problems of Performing Artists* 18, no. 4 (2003): 151-52.

290 Djalma Nunes Marques et al., "Flamenco Guitar as a Risk Factor for Overuse Syndrome," *Medical Problems of Performing Artists* 18, no. 1 (2003): 13.

291 Carlevaro, *School of Guitar*, 22.

292 Romero, *Classical Guitar Technique*,15.

Shearer indicates that excessive pressure, poor positions, inadequate movements, and emotional stress are the primary reasons behind counterproductive tension.[293] He further discusses Repetitive strain injury (RSI), which is a health problem caused by the prolonged performance of repetitive actions. Shearer claims that musicians are a high-risk group of RSI. RSI typically happens in the hands and arms, and it causes pain or impairment of function.[294] Moreover, shoulder pain is another health problem caused by counterproductive tension. Shearer mentions that chronic shoulder pain is caused by holding the shoulders out of their natural position. The guitarist commonly lifts the right shoulder and lowers the left shoulder when playing the guitar; there is no movement to help the right shoulder release its tension. Therefore, the pain frequently occurs on the right shoulder.[295]

Duncan indicates that performance anxiety is one factor that causes tension. He discusses both mental and physical relaxation, as many guitarists ignore mental relaxation. Duncan mentions that relaxing and moving the muscles freely starts with the guitarist's mental relaxation. However, since anxiety is a mental issue, dysfunctional tension is hard to control. Duncan provides the guitarist with some obvious causes of dysfunctional tension: (1) hunched shoulders, (2) straightened the little finger, (3) holding the left elbow away from the body, (4) flattened knuckles or splayed right-hand fingers, (5) excessive right-hand movement, (6) extra pressure on the left-hand thumb, and (7) arching the wrist excessively.[296]

293 Shearer, *Learning the Classic Guitar*, 125.

294 Shearer, 124.

295 Shearer, 131.

296 Duncan, *Classical Guitar Playing*, 3.

	The causes of tension
Carlevaro	Negative habits 1. Inappropriate practicing. 2. Deficient knowledge of techniques. 3. Neglecting efficient-movements. 4. Ignored stronger muscles.
Romero	Lack of sensitive kinesthesia of muscles.
Shearer	1. Excessing pressure. 2. Poor positions. 3. Inadequate movements. 4. Emotional stress.
Duncan	Anxiety.

Solutions

Depending on different causes, authors provide the guitarist with related solutions. Carlevaro provides the guitarist with three ways to prevent tension: understanding the notion of relaxation, applying the technique of fijación—fixing necessary muscles—when necessary, and controlling every movement by thought. When a muscle is not involved in a movement, it will naturally stay in a completely relaxed state. However, Carlevaro indicates that playing the guitar requires partial relaxation. In other words, the inactive muscle is loose and moved by the motions of the active muscle. The inactive muscle changes frequently depending on the music content. Therefore, it is important for the guitarist to be flexible in using each muscle of the hand.[297]

Carlevaro mentions that the application of fijación benefits the guitarist by helping them be aware of the function of the muscle. The technique of fijación is using the stronger muscles to lead movements. For example, as mentioned in Chapter Five, the guitarist can remove flexibility of various joints, and use the entire weight of the finger, the wrist, or the arm to increase the dynamic level. Moreover, the technique of fijación can be used for other performing nuance,

297 Carlevaro, 23–25.

such as timbre and speed requirement.[298] Since the technique of fijación helps the guitarist to use minimum effort to achieve maximum results, Carlevaro suggests that the instructor should teach the student how and when to use fijación appropriately.[299] He also advises that the guitarist should apply fijación in a flexible way and avoid holding the fixed element of the hand rigidly.

Additionally, to avoid negative habits, tension, and muscular fatigue, Carlevaro claims that mental concentration is required during practicing hours. Carlevaro observes that most students practice difficult passages with machine-like repetition until the fingers generate muscular memory. However, this may result in the student spending unnecessary hours to achieve the determined goal. Carlevaro suggests that the guitarist should dominate every movement by thought.[300] Combining every hand-movement with the next motion requires thought process. The guitarist needs to consider the direction of the shifting, the trajectory of the stroking, the use of pressure, the application of fijación, and so on. Carlevaro indicates when each movement is preceded by careful thinking, the guitarist not only can prevent negative habits and muscular issues, but also can acquire flexible motions, increased speed, and enhanced coordination between movements.

Similarly, Romero believes that mental concentration is important. Once the guitarist observes tension, they need to consciously stop all movements, determine the necessary muscles, and concentrate on sending energy only to the necessary muscles. As Romero says: "Trying to stop tension at its muscular location is wrong and inefficient; you must stop it in the mind before it can become a thought."[301] Additionally, he indicates that the guitarist should be sensitive to the

298 Carlevaro, 22.

299 Carlevaro, 24.

300 Carlevaro, 24.

301 Romero, 16.

internal sensation of muscular relaxation. To experience muscular relaxation, Romero suggests that the guitarist stop sending energy from the brain. He indicates that muscles will naturally maintain a state of relaxation if the brain does not send energy to the muscle. Having a comprehensive understanding of muscular application is also an important solution for preventing tension. Romero mentions that the guitarist needs to focus on the different elements of the hand depending on relative musical content. For instance, what muscles should be used when playing rest stroke? What muscles need to lead the shifting of the left hand? Which muscles of hands can enhance speed?[302]

Shearer suggests that the guitarist needs to have a better understanding of muscles, such as muscular coordination, counterproductive tension, and the development of RSI.[303] Moreover, he claims that the guitarist should be aware of the warning signs of RSI, such as slightly quivering fingers, and should stop playing when they feel pain or loss of control.[304] To avoid shoulder pain, Shearer suggests the guitarist lift and drop the shoulder several times to determine a relaxed position. The guitarist can also move the right arm from string to string carefully and pay attention to the position of the shoulder. Any movement of the arm should avoid raising the shoulder.[305]

Duncan offers three approaches to avoid tension; controlling nervousness and anxiety, building the understanding of relaxation, and utilizing functional tension. Duncan claims that there is no solution to reduce nervousness; therefore, the guitarist should make nervousness a part of performance: "As a matter of fact, a certain amount of nerves can actually enhance a

302 Romero, 15.

303 Shearer, 124.

304 Shearer, 127.

305 Shearer, 133–135.

performance."[306] Duncan also suggests that guitarists should understand how to transfer an appropriate degree of energy to the strings, and have the ability to locate places within the music to relax the muscles.[307]

To apply functional tension appropriately, Duncan suggests that the guitarist treat the entire arm as a system of compound levers. The guitarist needs to understand where to set the three components of the lever—resistance, force, and fulcrum—depending on the music content. Hand movement commonly applies levers, which set the force between the fulcrum and the resistance (see figure 7-1).[308] Movement of the right-hand fingers require the knuckles to become the fulcrums and the other two joints to be subsidiary fulcra. The strings serve as mechanical resistance. To acquire efficient and effective stroking, the guitarist needs to fix the middle and tip joints against the resistance of the strings (see figure 7-2).[309] In other words, the movement of the finger-stroking begins from the knuckle. Duncan further indicates that every guitarist can adjust the fixation of the tip joint depending on individual differences. A subtle compensatory flex in the tip joint is allowed. Similar to the right hand, the knuckles of the left-hand fingers also serve as the fulcrum, and the middle and the tip joints should avoid collapsing (see figure 7-3).[310]

306 Duncan, 3.

307 Duncan, 2.

308 Duncan, 5.

309 Duncan, 6.

310 Duncan, 7.

Figure 7-1. The movements of the hands (Duncan 1980, 5)

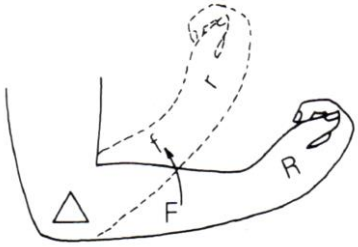


Figure 7-2. The movements of the right-hand fingers (Duncan 1980, 5)

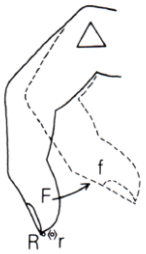
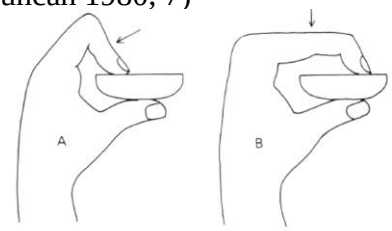


Figure 7-3. Collapsing the middle and the tip joints (Duncan 1980, 7)



These suggestions indicate the importance of using appropriate muscles. The guitarist should be able to use the corresponding muscles in related techniques and keep inactive muscles in a relaxed state. The other possible solutions of preventing tension include: (1) to apply mental concentration to recognize false techniques, (2) to process the movements of the hands, (3) to coordinate the use of muscles, (4) to control the degree of pressure, (5) to acquire the sensation of relaxation, (6) to observe the produced tension, (7) to send the message of stopping tension, and (8) to control anxious feelings. Preceding every movement by thought aids the guitarist in saving time and effort to achieve the desired effect. Unnecessary time and effort may further produce numerous problems, such as negative habits, tension, and muscular fatigue. Therefore, it is important for the guitarist to practice the guitar with concentration to avoid physical injury.

	Solutions
Carlevaro	1. Partial relaxation a. Fijación- the use of the muscles. 2. Mental concentration a. Avoid repeating false techniques. b. Dominate movements by thought.
Romero	1. Sensation. 2. Muscular application. 3. Send the message from the mind.
Shearer	1. RSI a. Only practice modest amounts of time. b. Stop playing once pain is observed. 2. Shoulder pain a. Determine the relaxed position of the shoulder. b. Move the right arm from string to string without raising the shoulder.
Duncan	1. Mental relaxation a. Make nervousness a part of performance. b. Be confident. c. Increase sensitive control, physical sensation, and sound perception. 2. Determine the places in the music to relax the muscles. 3. Apply appropriate degree of pressure a. Set the three components of the lever—resistance, force, and fulcrum—depending on different music content.

Practicing hours

Carlevaro and Shearer both indicate that the number of hours practiced does not measure a student's achievement. Carlevaro believes that efficient practice is more important than practicing many hours a day without proper form. Shearer suggests that the guitarist should only practice a modest amount of time to avoid RSI. He indicates that most guitarists practice harder to resolve symptoms of counterproductive tension; however, this may make symptoms worse.[311] He further provides the guitarist with two exercises to aid them in releasing intense muscles: stretching and coordination exercises. Stretching exercises are pulling the muscles in the opposite direction, such as pulling different combinations of fingers in an opposite direction from

311 Shearer, 127.

the palm (see figure 7-4).[312] Coordination exercises are similar to the alternation of fingers. The guitarist applies different permutations and combinations of stationary and flexed fingers. For instance, the fingers *m*, *a*, and *c* are held straight, and the middle joint of finger *i* is flexed. Next, the guitarist can flex the middle joint of finger *m* while other fingers are straight (see figure 7-5).[313]

Figure 7-4. Stretching exercises
(Shearer 1990, 109)

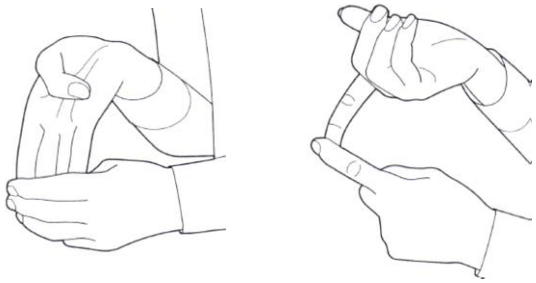
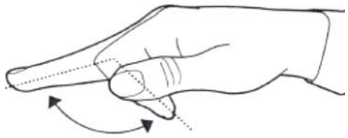


Figure 7-5 Coordination exercises
(Shearer 1990, 112)



Romero provides the guitarist with the "Awareness" exercise, which includes two parts: recognizing and activating. In the recognizing part, the guitarist closes their eyes and places the fingers on the strings without any pressure. The purpose of this activity is to determine the thickness and tension of different strings. The next step is recalling the feeling of each string by holding the same position and lifting the hand from the strings. In other words, the guitarist needs to understand accurately the thicknesses and tensions of different strings even though the hand is not touching the strings. In the activating part, the guitarist should relax inactive muscles while other muscles are used. To practice the activating part, the guitarist touches the 1st finger (left hand) to the knuckle of the right-hand fingers when they are stroking the strings. Romero

312 Shearer, 108.

313 Shearer, 112.

indicates, in this way, the guitarist should be able to understand which part of the finger leads the movement of the stroking.[314]

	Practice hours
Carlevaro	Avoid repeating faulty techniques while practicing.
Romero	1. Stopping movements from the mind (once tension is observed). 2. "Awareness" exercise.
Shearer	1. Do not practice too much, stop practice (once tension is observed). 2. Stretching and coordination exercises.
Duncan	Increase personal confidence, sensitive control, physical sensation, and sound perception while practicing the guitar.

Summary and guidelines

Tension is caused by inappropriate practicing, deficient knowledge of techniques, inefficient movements, and ignoring muscle function. If the guitarist does not observe and resolve tension immediately, it may become a serious problem. Therefore, it is important to enhance sensitive kinesthesia of muscles. The guitarist needs to define the appropriate degree of pressure by understanding the thicknesses and tensions of strings. Furthermore, applying the awareness exercise aids the guitarist in having a better understanding of finger movements. The technique of fijación helps the guitarist understand the use of muscles.

Warming up, reducing anxiety, taking breaks, and stretching exercises are effective strategies for avoiding playing-related injuries.[315] In the article "Finger Tips," David Templeton mentions that warming up is an important strategy to keep musicians from risk of muscular injuries.[316] While practicing, the guitarist needs to increase confidence while reducing nervousness and performance anxiety. Taking breaks during practice can enhance physical

314 Romero, 15–17.

315 Bosi, "Healthier Guitarist," iii.

316 David Templeton, "Finger Tips," *Strings* 18, no. 7 (2004): 21.

stamina and mental and emotional energy.[317] After practicing, the guitarist can do stretching and coordination exercises to relax the muscles. In addition, if the guitarist finds any symptoms of tension—quivering fingers or muscular pain—they should stop the movement, rethink, and then recollect the initial feeling of the string tension and necessary muscle tension. There are various methods for releasing tense muscles; nevertheless, it is important for the guitarist to keep in mind that practicing harder will not resolve the tension. The guitarist should practice with mental concentration to prevent and resolve tension.

317 Gerald Klickstein, "Seven Habits for Healthy Performance," *American String Teacher* 53, no. 2 (May 2003): 52.

CHAPTER EIGHT: THE TECHNIQUES ASSOCIATED WITH THE ETUDES

Overview of Etudes

All of the discussed authors offer a variety of etudes, organized in groups such as scale playing, arpeggio playing, block chords, barre technique, slur playing, and special techniques (pizzicato, harmonics, and tremolo techniques). Proceeding in this order, the guitarist is given a clear outline of techniques, and can select the appropriate etude depending on their training goals.

Sor

Sor provides the guitarist with eighty-eight examples, six exercises on the interval of a third, and six exercises on the interval of a sixth. He uses roman numerals as page numbers: Plate I for page one. The eighty-eight examples are labeled with Ex: 1–88, while the twelve exercises are only marked with numbers. To avoid confusion, the following table includes the plate (page) number for the twelve exercises.

Sor's etudes	
Scale playing	Examples no. 18, 19, 28 to 30, 50 to 61, 72, and 73
Arpeggio playing	Plate XIV no.3 Plate XVI Examples no. 14, 20, 21, 22, 24, 25, and 26
Interval third	Examples no. 33–38 Plate XI Plate XII
Interval sixth	Examples no. 47 and 48 Plate XIII, XIV no. 4, and XV
Block chords	Example no. 49
Slur techniques	Examples no. 65 and 70

Aguado

Aguado's method includes several examples and exercises in sections one and two. However, this chapter only discusses the twenty-seven etudes in section three. The following table shows the associated techniques in each etude.

Aguado's etudes	
Scale playing	
Arpeggio playing	Etudes 1, 2, and 5 to 14
Thirds	Etudes 3 and 4
Sixths	Etude 24
Block chords	Etude 19
Slur techniques	Etude 18
Tremolo techniques	Etude 23
Block chords & Slur techniques	Etudes 15 and 17
Scale playing & Block chords	Etude16
Arpeggio playing & Slur techniques	Etude 25
Scale playing & Block chords & Slurs techniques	Etudes 20–22 and 26
Scales playing & Arpeggio playing & Block chords & Slur techniques	Etude 27

Carlevaro

Carlevaro provides the guitarist with numerous etudes in his publications of *Cuadernos no.1* through *no.4*. Cuaderno is the Spanish term for notebook. Carlevaro does not include etudes in his method; however, he writes instructions for practicing *Cuadernos no.1* through *no.4*. In addition, he uses some samples of music from composers like Napoleon Coste, Sor, and Manuel Ponce to address dampers and vibratos.

Carlevaro's etudes	
Scale playing	Cuaderno no. 1
Right-hand techniques	Cuaderno no. 2
Left-hand techniques	Cuaderno no. 3 & no.4

Romero

Romero's method includes Mauro Guiliani's (1781–1829) right-hand and left-hand studies. He also includes warm-up exercises from Francisco Tàrrega and etudes from Celedonio Romero (C. Romero). Romero applies different terms—studies, exercises, and etudes—to distinguish these practices.

Romero's etudes	
Scale playing	Tàrrega's warm-up exercises: no. 9 to 12, 16, and 17
Arpeggio playing	Guiliani's left-hand studies
	Guiliani's right-hand studies: no. 2–20, 25–50, and 81–120
	Tàrrega's warm-up exercises: no. 18 and 19
	C. Romero's etude no.3
Intervals	Guiliani's right-hand studies: no. 51 and 60
	Tàrrega's warm-up exercises: no. 13 and 15
Block chords	Guiliani's right-hand studies: no. 1, 21–24, and 61–80
	C. Romero's etude no. 4
Slur techniques	Tàrrega's warm-up exercises: no. 1, 8, and 12
Tremolo techniques	C. Romero's etude no. 1
Scale & Arpeggio playing	C. Romero's etude no. 2
Scales & Arpeggio & Block chords & Slur techniques	C. Romero's etude no. 5–7

Shearer

Shearer includes examples, duets, and solo etudes in *Learning the Classical Guitar Part 2: Reading and Memorizing Music*. The purpose of this method is to develop the guitarist's ability to sight read and memorize music. Therefore, he does not arrange these practices depending on the different techniques. In other words, a chapter may include practices for training different techniques. This section only discusses solo etudes, which have been marked solo numbers and can be found at the top left of the music. Each etude is credited with the initial of its composer: A. H. for Alan Hirsh, A. S. for Aaron Shearer, and S-H for Alan Hirsh and Aaron Shearer.

Solo etude no.	Music	Page number	Author
Open-string playing			
1	Bugler's tune	17	S-H
2	Dance of four	25	S-H
3	Dance of six	27	A. H.
4	Dance of the upward skip	30	S-H
5	Dance of the downward skip	35	S-H
Scale playing			
29	Danza in C	113	S-H
51	Quint-waltz	186–187	A. H.
Arpeggio playing			
6	Serenade I &II	44 & 46	A. S.
7	Slavic Dance I & II	47–48	A. S.
8	Folk song & Folk dance	49–50	A. S.
9	Andante I &II	58–59	A. S.
11	Cantilena I &II	66–67	A. S.
13	Etude Moderne	75	S-H
14	P, I, M, I Etude I	79	A. S.
15	P, I, M, I Etude II	80	A. S.
16	P, I, M, I Etude III	83	S-H
17	P, I, M, I, M, I Etude	84	
18	Cradle Song	87	S-H
19a	P, I, A Etude	90	A. S.
19b	P, I, A, I Etude	91	A. S.
19c	P, I, A, I, A, I Etude	92–93	A. S.
20	Merry Dance	94	S-H
21	Theme and Variation	95	A. H.
22	Single-string alternation etude I	99	A. H.
23	Single-string alternation etude II	101	S-H
24	Crossing etude I	103	S-H
25	Crossing etude II	106	S-H
26	Crossing etude III	107	A. S.
27	Crossing etude IV	108	S-H
28	Crossing etude V	109	A. S.
35	Ballade	132–133	A. H.
36	Etude in e minor	136	S-H
37	Arabesque	145	A. H.
41	A, M, I Etude I	160–161	A. H.
42	A, M, I Etude II	162	A. S.
45	A, I, M Etude I	169	A. H.
46	A, I, M Etude II	170	A. S.
48	A, M, I, M Etude I	180	A. H.
49	A, M, I, M Etude II	181	A. S.
52	Reverie	188–189	A. H.

53	I, A, M, A Etude	192–193	A. H.
55	A, I, M, I Etude	200	A. H.
Intervals			
10	Music box I &II	64–65	S-H
12	Moorish Dance	68	A. S.
32	Rustic Idyl	125	S-H
33	Minute	126	S-H
34	Catalonian folk song	127	A. H.
38	Farewell	146– 147	A. H.
56	Carousel	204–205	A. H.
Block chords			
30	Chanson	121	A. H.
31	Pavane	122	A. H.
39	Alla Marcia	152	A. S.
50	Divertimento	184	A. H.
Slur techniques			
43	English dance	166	A. H.
44	Serenata	168	S-H
47	Soliloquy	176	A. H.
Others—Scales & Block chords			
40	Entrada	156	A. H.
54	Danza Mexicana	196–197	A. H.

Duncan

Duncan does not provide the guitarist with complete etudes; he only includes brief examples—some original and some samples of music—in his method.

Duncan's etudes	
Scale playing	p.71–74 & p.83
Arpeggio playing	p.64–66 & p.81
Intervals	p.80 & p.85 & p.82
Block chords	p.77–79
Slur techniques	p.28–30 & p.88–89
Tremolo techniques	p.68–69

Similarities and Differences

This section discusses the similarities and differences between each author's descriptions and explanations regarding proper practice. Some discussions will be offered in regard to right- and left-hand issues.

Scale playing

Crossing and shifting

Besides improving one's playing of scalar passages in the repertoire, scale practice is important because it enhances the right hand's ability to cross strings and improves left-hand shifting. Unlike other instruments, playing a scale legato is a challenge. Sor claims that producing staccato notes is the nature of the guitar, and suggests that guitarists apply slur techniques to enhance the connections between notes.[318] However, slurs may influence the balance and value of notes, as slurred notes may be produced shorter or softer. Therefore, to connect notes smoothly, the guitarist needs to move both hands in synchronization at accurate times. Authors provide various approaches to aid the guitarist in practicing right-hand crossing and left-hand shifting.

To support the right-hand fingers crossing strings, Sor and Duncan believe that string crossing requires the right forearm to slide back and forth to support finger motions.[319] Shearer suggests that the guitarist practice string crossing on open strings. After being familiar with right-hand motions, the guitarist can start playing complete open-position form, which is playing a scale on the first four frets and open strings.[320] Shearer further recommends that the guitarist

318 Sor, *Method for the Spanish guitar*, 21.

319 Sor, 22; Duncan, *Classical Guitar Playing*, 73.

320 Shearer, *Learning the Classic Guitar*, 110.

reverse the order of the fingering. For example, if the guitarist usually uses finger *i* to play the first note, they can instead employ finger *m* as the beginning finger.[321]

Duncan mentions that if the guitarist releases the string or shifts the left hand too early, it will shorten the value of the note.[322] To improve left-hand shifting, practicing subdivisions of quarter notes is a useful method. Carlevaro and Duncan claim that practicing short notes requires shifting the left hand to the new position faster than normal. The guitarist should remember the movements of shifting while playing short notes and apply the movements in playing quarter notes.[323] Romero provides the guitarist with seven patterns of rhythms, which should be practiced daily. He further suggests that the guitarists practice scales in different dynamics, such as staccato, legato, crescendo, diminuendi, subito *f*, or subito *pp*.[324] Additionally, to enhance shifting, Shearer suggests that the guitarist shift the left hand when sounding the open string.[325]

Duncan provides the guitarist with additional approaches to enhance scale playing: practicing slowly, applying staccato technique, and synchronizing both hands.[326] He also suggests that the guitarist add rests before notes to make preparation become a habit. He claims that these rests offer both hands time to prepare on the string, to find the following notes, and to shift to new positions (see figure 8-1).[327] Additionally, he mentions that the guitarist can rest finger *p* on the 6th string while practicing scales to enhance the stability of the right hand.[328]

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321 Shearer, 112.

322 Duncan, 72.

323 Carlevaro, *School of Guitar*, 86; Duncan, 74.

324 Romero, *Classical Guitar Technique*, 44.

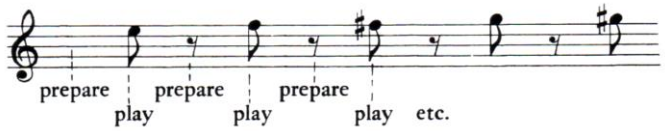
325 Shearer, 185.

326 Duncan, 72.

327 Duncan, 71.

328 Duncan, 73.

Figure 8-1. Example of the right-hand preparation (Duncan 1980, 71)



Fingerings

Right- and the left-hand fingerings are significant factors in playing scales. Applying appropriate fingerings smooths movements and increases speed. While some authors have similar recommendations, a few have differing opinions on the right-hand fingerings.

As mentioned in Chapter Five, Aguado utilizes the same right-hand finger to play consecutive notes, but only in limited situations: different values (see figure 8-2, No.2) or after slurs (see figure 8-2, No.3).[329] Romero uses this technique to increase the speed of the scale, but only applies it in descending scales. He uses the same finger on the lower string after playing the note on the open string (see figure 8-3).[330]

Figure 8-2. Example of repeating fingerings (Aguado 1981, 80)

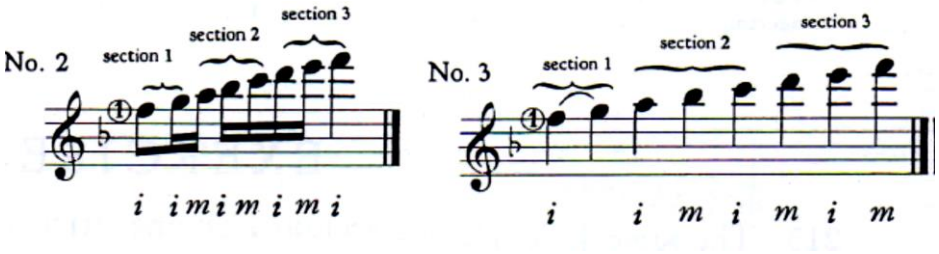
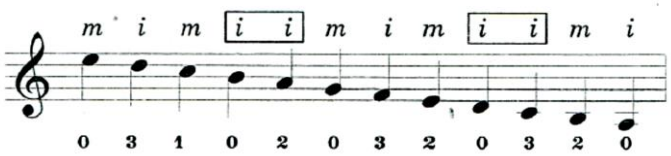


Figure 8-3. Example of repeating fingerings (Romero 2012, 45)



329 Aguado, *New guitar Method*, 80.

330 Romero, 45.

On the other hand, Duncan and Shearer provide the guitarist with distinct ideas for right-hand fingerings. This section will use the terms "clean fingering" and "cross-fingering," which are used in the Glise's *Classical Guitar Pedagogy*.[331] Duncan believes that the guitarist should use finger *i* when crossing to a higher string, and finger *m* for crossing to a lower string.[332] This fingering is called cross-fingering. On the other hand, Shearer indicates that lower finger(s) play the lower strings, while higher finger(s) play higher strings. For instance, if finger *m* strokes the 2nd string (the higher string), finger *i* should be used for stroking the 3rd string (the lower string). If finger *m* strokes the 3rd string (the lower string), the guitarist should apply finger *a* to stroke the 2nd and the 1st strings (the higher strings).[333] As Glise indicates, this "clean" fingering requires that one "always think of this in relation to where the fingers would be if they were planted on their 'home strings."[334]

Both types of right-hand fingering are used by modern guitarists. Nonetheless, the guitarist needs to follow the nature of the right hand. When the right hand rests on the guitar in a relaxed state, fingers *m* and *a* are naturally positioned around the higher strings. Moreover, finger *m* is longer than finger *i*. If the guitarist uses finger *i* to stroke ascending strings, they need to straighten the finger to reach the higher string. Conversely, while stroking the higher string with finger *m*, the guitarist can acquire smoother string-crossing because of its length and placement. Glise suggests that beginners should avoid using cross-fingerings because it is hard for them to develop the technique of moving from one string to another in alternation. Furthermore, clean

331 Glise, *Classical Guitar Pedagogy*, 57–58.

332 Duncan, 72.

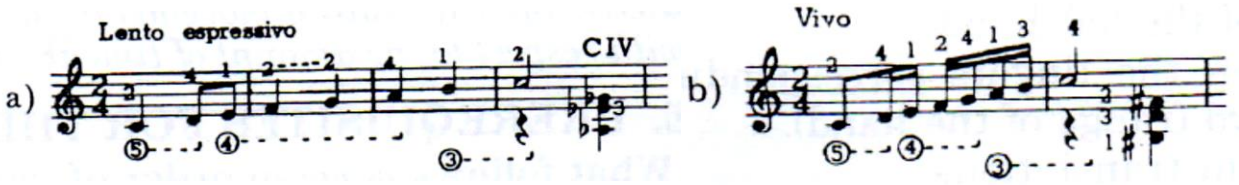
333 Shearer, 78.

334 Glise, 57.

fingerings can enhance beginners' sensation of distance between the strings and improve advanced guitarists' scale playing.[335]

Because a guitar has nineteen frets or, in some cases, twenty frets, moving the left hand to a new position by jump is unavoidable. The guitarist should consider the placement of upcoming notes while arranging left-hand fingerings. Sor suggests that the guitarist should try to arrange all fingerings in the same position.[336] Carlevaro utilizes scales to connect two positions. He mentions that while the guitarist arranges a left-hand fingering, they need to consider not only tempo of the music, but also the possibilities of the instrument. In figure 8-4, Carlevaro slides the 2nd finger from note F to G to enhance expression. Moreover, this fingering allows the guitarist to play the last chord without changing hand position.[337]

Figure 8-4. Carlevaro's example of fingering arrangement (Carlevaro 1984, 89)



Sor and Aguado provide the guitarist with some approaches to playing scales in different keys. Sor employs chords as models for determining the fingerings of the relative scales. For example, he indicates that to play a C major scale, the fingers will naturally fall in the same relative position as if the guitarist were to form a C major chord (see figure 8-5).[338]

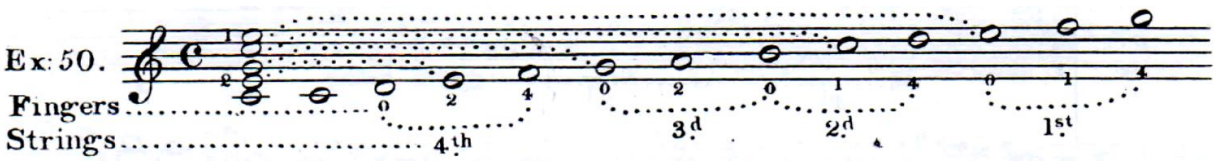
335 Glise, 58.

336 Sor, 31.

337 Carlevaro, 89.

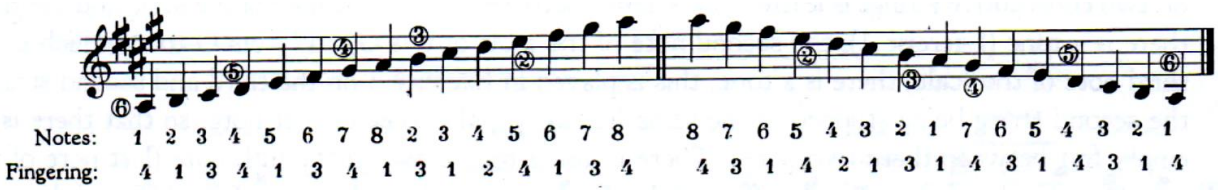
338 Sor, 29.

Figure 8-5. Sor's scale fingerings (Sor 1971, plate XVII)



Aguado discusses both one-octave scales and two-octave scales. He provides the guitarist with four ways to play one-octave scales; on one string, on two strings, on three strings, and on bass strings. He indicates that once the guitarist becomes familiar with the aforementioned patterns, they can employ the fingerings as a model to play scales in different keys.[339] Similarly, to play two-octave scales, the guitarist can apply the fingerings in a specific key to fit in other keys because all major keys include the same order of intervals (see figure 8-6).[340] However, Sor's and Aguado's approaches are seldom used today. The majority of modern guitarists use Segovia's scale system because the fingering is organized systematically. The system was first established architecture of the scale playing of the classical guitar.[341]

Figure 8-6. Aguado's two-octave scale (Aguado 1981, 82)



339 Aguado, 79–81.

340 Aguado, 82.

341 Andres Segovia, *Diatonic Major and Minor Scales*. (Washington, D. C.: Columbia Music Co., 1953), 1.

Increasing the speed of scales

To increase speed, Duncan suggests that the guitarist hold the right-hand wrist lower and curve the fingers more than in ordinary playing. Moreover, the guitarist needs to avoid collapsing all right-hand joint, which slows down movement.[342] Shearer indicates that the guitarist should avoid collapsing the middle joint of the 4th finger on the left hand. The left-hand fingers should be held close to the fingerboard—especially the 4th finger.[343] In addition, left-hand fingerings influence the velocity of scale playing. Sor and Carlevaro both arrange scale fingerings in the same position but on different strings. Carlevaro further indicates that this arrangement can prevent shifting and is useful for playing fast scales.[344]

Scale playing—The right hand			
	Fingerings	**Practice**	**String crossing**
Sor	N/A.	N/A.	Displace the position of the arm.
Aguado	1. Depends on the value of the note. 2. Repeats the same finger.	N/A.	N/A.
Carlevaro	Undefined.	Undefined.	Undefined.
Romero	Velocity—playing descending scales may repeat the same fingering.	Different dynamics.	N/A.
Shearer	N/A.	1. Reverse the order of the fingering. 2. Rest strokes vs. free strokes.	1. Practice open strings. 2. Play open-string form.
Duncan	Velocity—lower the wrist, curve the fingers, and keep tip joints firm.	1. Preparation—shorten every note and add rests. 2. Rest finger *p* on the 6th string.	1. The right-hand fingers—finger *i* for ascending scale, finger *m* for descending scale. 2. The right arm—move back and forth.

342 Duncan, 76.

343 Shearer, 128.

344 Carlevaro, 89.

Scale playing—The left hand			
	Connection	**Fingerings**	**Practice**
Sor	Apply slur techniques.	1. Consider the position of upcoming notes. 2. Keep the left hand in the same position to play most notes. 3. Utilize a chord as a model to arrange the scale's fingering.	N/A.
Aguado	N/A.	Employ the provided fingerings as a model to play scales in different keys.	N/A.
Carlevaro	Practice subdivisions of quarter notes.	1. Consider the possibilities of the instrument and tempo of the music. 2. Design the fingering depending on the positions of upcoming notes.	N/A.
Romero	Practice scales in different rhythms.	N/A.	N/A.
Shearer	Shift the hand while sounding the open string note.	N/A.	1. Avoid collapsing the middle joint of the 4^{th} finger. 2. Fingers should be close to the fingerboard.
Duncan	1. Avoid releasing the string or shifting the left hand too early. 2. Practice slowly, apply the staccato technique, synchronize both hands, and practice short notes.	N/A.	N/A.

Arpeggio playing

Left-hand movement

Arpeggios involve playing notes of chords one after the other in succession. However, the guitarist should place the left-hand fingers simultaneously on the strings rather than separately. Sor suggests that the guitarist practice block chords before playing arpeggios to

enhance position-changing.[345] Aguado and Duncan mention that when releasing the left-hand fingers, the guitarist needs to ensure that the last note can be heard clearly. They suggest that the guitarist hold the active fingers long enough for the full value of the last note.[346]

Right-hand movement

Playing arpeggios requires each right-hand finger to move to a different point in its orbit. When a certain finger strokes the string, the motion should trigger the relative finger to move to its position. For example, one finger strokes the string while its following finger prepares to stroke; the first finger returns to the prepared position while the second finger sounds the strings. The relative finger may move in an opposite direction with the stroking finger. Therefore, to carry out these movements, the guitarist needs to move each finger independently. Authors have different opinions on the definition of independence.

Sor believes that, while playing arpeggios, fingers *i* and *m* move independently without influencing the right-hand position. Moreover, these two fingers should not always follow the motion of finger *p* in the same manner. Depending on the type of arpeggio, fingers *i* and *m* should follow the motion of finger *p* in different orders.[347] Aguado mentions that every stroking movement of finger *p* should be equal and slight, so as not to dominate the melody and other accompaniment.[348] While playing alternations of *p, i, m,* and *a,* Aguado suggests that the guitarist release fingers *i* and *m* simultaneously.[349] These two fingers return to the original place independently while other fingers are stroking.

345 Sor, 20.

346 Aguado, 71; Duncan, 64.

347 Sor, 20.

348 Aguado, 124.

349 Aguado, 73.

Carlevaro indicates that independence is moving a finger without influencing other fingers.[350] When using his approach, the active finger returns to the original place immediately after stroking, and then the next finger strokes. Although Romero, Shearer, and Duncan all believe that moving fingers independently is important, they argue that the stroking finger does not need to wait until the previous finger finishes the motion. They claim that the returning motion and the stroking motion can be done simultaneously. In other words, the finger can return to the original place while the next finger is stroking.[351] Duncan and Shearer suggest that the guitarist should not hold the finger rigidly. Shearer believes that if fingers move in the same direction, they need to follow sympathetic movement to move to the prepared position when the previous finger is stroking. For instance, when finger *i* is stroking the string and moving to the palm, finger *m* will be led to the same direction to sound the string.[352] Shearer further mentions that this sympathetic movement benefits continuous playing of successive strings.[353] Similarly, Duncan claims that the guitarist should allow the active finger to bring the following finger to its prepared position.[354]

Approaches to preparation

Duncan claims that preparation is the most important issue in arpeggio lessons.[355] Romero and Duncan both suggest that the guitarist apply full plant and sequential plant to aid fingers in returning to the prepared position independently. Full plant is positioning all fingers on

350 Carlevaro, 103.

351 Romero, 24; Shearer, 66; Duncan, 64.

352 Shearer, 66.

353 Shearer, 63.

354 Duncan, 68.

355 Duncan, 64.

the strings and playing one finger at a time, while sequential plant is positioning the finger on the string when the previous finger is stroking the string.[356] Duncan advises beginners to practice full plant in slow tempos. He indicates that the right hand needs to follow a cyclical movement while playing arpeggios; placing the finger on the string solidly, sounding the string by pushing and releasing the energy, and returning to the original position. The guitarist should avoid lifting finger *a* when finger *m* is stroking. As the finger movements become fluent, the guitarist begins to have each finger at a different point in its orbit (sequential plant).[357]

Arpeggio playing—The left hand		
Sor	Practice block chords.	
Aguado	1. Ensure the last note of each group can be clearly heard. 2. Press strings simultaneously. 3. The left-hand movement should be nimble and at the correct time.	
Duncan	Avoid shortening the last note of each group.	
Arpeggio playing—The right hand		
	Independence	**Practice**
Sor	Move independently without influencing the right-hand position.	N/A.
Aguado	1. Have better control on finger *p.* 2. Fingers *i* and *m* release force at the same time.	N/A.
Carlevaro	The active finger should not influence the inactive finger(s).	N/A.
Romero	When a finger is in motion, the other finger prepares to play the next note.	Full plant and sequential plant.
Shearer	Sympathetic movement and opposite movement.	N/A.
Duncan	Each finger should stay at a different point in its orbit.	Practice full plant in slow tempo.

Block chord playing

Playing block chords requires at least three fingers of the right hand to stroke strings at the same time. However, if the guitarist does not have experience sounding two or more notes together, they may face some difficulties in controlling right-hand movement, such as rolling the

356 Romero, 25.

357 Duncan, 64.

chord. Therefore, all authors include interval exercises—sounding two notes simultaneously—in their methods.

Synchronous movement is a significant requirement while playing block chords. The left and right hands should press and stroke strings all at the same time. The active fingers of the right hand should follow through the strings simultaneously. Similarly, every active finger of the left hand needs to press and release the strings synchronously. Romero and Duncan provide the guitarist with approaches to train synchronous movement. Romero recommends that the guitarist hold the right-hand fingers as a unit and imagine they are one finger when playing chords.[358] Duncan suggests that the guitarist move the right hand to the next chord before the left hand releases the string. He indicates that, although the preparation will create silence between each chord, it allows the left hand to move freely and accurately to the next position.[359] Duncan mentions that once the guitarist is familiar with the preparation movements, they can shorten the value of silence gradually until both hands work synchronously.[360]

Additionally, because of physical differences of right-hand fingers, some fingers may not produce as loud a sound as other fingers. Aguado mentions that finger *i* is the weakest finger of fingers *p*, *i*, and *m*. Therefore, the guitarist should ensure the note produced by finger *i* can be heard clearly.[361] However, Shearer believes that finger *a* is the weakest finger.[362] This difference may be caused by the use of finger *a*. In Aguado's method, he applies finger *p*, *i*, and *m* to play three-notes chords, while Shearer discusses using fingers *p*, *i*, *m*, and *a* or *i*, *m*, and *a* to play

358 Romero, 24.

359 Duncan, 78.

360 Duncan, 78.

361 Aguado, 67.

362 Shearer, 91.

block chords. Finger *a* requires a longer trajectory to complete the stroking, but beginners normally stop the motion before the stroking is completed. In this situation, finger *a* only slightly slides on the string rather than having a full stroke. Therefore, while playing block chords, it is important for the guitarist to ensure that every finger strokes the strings and completes the trajectory of the stroking.

Block chords playing		
	Right hand	**Left hand**
Sor	Undefined.	Undefined.
Aguado	1. Avoid bumping the right hand. 2. Stroking movements start from the middle joint. 3. Take special care of finger *i*.	1. Press the strings all at the same time. 2. Hold the left hand close to the strings. 3. The left-hand thumb pushes forward.
Carlevaro	Undefined.	Undefined.
Romero	1. Hold fingers as a unit. 2. Avoid bumping the right hand.	N/A.
Shearer	1. Stroking movements start from the middle joint. 2. Avoid holding the inactive finger rigidly. 3. Take special care on the finger *a*.	N/A.
Duncan	Move the right-hand to the next chord before the left-hand releases the string.	N/A.

CHAPTER NINE: CONCLUSION

There are certain truths about fundamental guitar technique that cannot be argued, all of which rely on an understanding of how the human body works. If the body is stressed by poor posture, such as severe wrist bend (in either hand) or misaligned tendons or muscles, the results will generally be movements that are inefficient or physically harmful. Once the instructor acquires the knowledge of incorrect positions and physical differences, they are able to provide students with an appropriate approach based on the methods in this paper. The instructor can also help the student correct inefficient movements, which are being presented during their instruction.

All of the methods presented in this paper can be seen as sound. Fernando Sor and Dionsio Agaudo were great masters of their craft. Pepe Romero, Abel Calavaro and Charles Duncan were performers of our day, with Pepe Romero being one of the true virtuosos of our time. Aaron Shearer is known as one the great educators of the instrument, producing some of the best younger virtuosos today. However, the guitarist may find that some nineteenth-century techniques are currently obsolete. Nonetheless, this does not imply that these techniques are wrong. It suggests that these techniques may not fit today's instrument or meet technical requirements in today's musical world. Moreover, due to physical differences, an approach used by famous performers may not be appropriate for all guitarists.

Therefore, the choice of which method to use is based on the student's response to the given instruction and the instructor's thorough understanding of each method presented in this study. The instructor needs to observe that the student's response to either one of the postures or techniques is correct or incorrect. As an example, in teaching posture or sitting position, physical nature—arm length, torso length, or body size—will greatly affect the results. In developing

right-hand sound production, the student's finger-length will generally effect the hand position and movements. Similarly, the lengths of the left-hand fingers influence the relationship between the palm and the guitar-neck. Therefore, it is important to be aware of the variables presented by different methods and then use the most appropriate approach or a combination of the variables based on individual differences. One's choice of which methods to use should be determined by the instructor's ability to recognize variables of different methods, physical differences, body tension, or misaligned tendons. In addition, the instructor must also be knowledgeable of the various etudes presented by each author and what those etudes are designed to do. Some students take longer to develop certain techniques; others may be able to master the same technique quickly. Therefore, it is important for an instructor to identify the student's weaknesses and provide the appropriate etudes.

The teaching of fundamental technique needs to provide students with not only the appropriate approach, but also the reasoning for doing something a certain way. Glise mentions that providing reasons benefits the guitarist's ability to think independently, apply knowledge in various situations, and build confidence.[363] Sor states that one will "make a better impression received by persuasion than by memory."[364] However, every individual's ability of grasping the same concept is different. To help students have a better understanding of the process of learning, the instructor must comprehend each student's level and the application of the different methods presented. Each of the methods in this paper has advantages or disadvantages in regard to the level of the students' ability to grasp information: The responsibility of recognizing the

363 Glise, *Classical Guitar Pedagogy*, iii.

364 Sor, *Method for the Spanish guitar*, 24.

students' progress falls on the teachers' ability to note that progress. In other words, the instructor needs to have a comprehensive understanding and translate it into appropriate terms if necessary.

While teaching students, the instructor needs to avoid providing the student with too many choices and requesting the student to choose. Observing the student and providing appropriate methods are the instructor's duties. Too much information and excessive choices will cause confusion to inexperienced students. Shearer indicates that a "student of any age should never be burdened with information they can't understand and quickly apply."[365] The instructor should know what to expect from different levels or ages of students and provide appropriate information when it is needed. Depending on how many techniques they need to learn, the instructor can make an appropriate schedule for the student's entire term.

An instructor may meet a variety of students, ranging in level, age, and physical qualifications. Understanding different approaches allows the instructor to provide the most appropriate position and techniques for the individual student. Moreover, when the instructor comprehends the evolution and development of fundamental guitar techniques, they would know what techniques are still used today and what techniques have been modified or discarded. Therefore, the instructor can avoid providing the student with obsolete techniques. Additionally, by recognizing each method's strengths and variables, the instructor can combine methods and apply the needed information efficiently.

This research does not include a comprehensive account of guitar history; however, guitarists and instructors should be able to understand the development of fundamental guitar techniques from the nineteenth century to the present. This research gives guitarists and instructors a better understanding of the fundamental guitar techniques as demonstrated by the

365 Shearer, *Learning the Classic Guitar*, iv.

six studied books. In addition, any reader interested in checking the fundamental techniques or further developing their own pedagogies will find useful information in this research. Regarding implications for further research, one may utilize this paper as a reference and interview different performers or instructors to compare the findings in this research. In short, developing proper fundamental techniques benefits a guitarist's future performing skills. It is important for instructors and guitarists to utilize appropriate methods based on those fundamental truths about Classical Guitar technique—efficiency of movement and an understanding of how the body works. Through a thoughtful study of the presented methods and an understanding of the principles of muscle movement, the reader can further develop his pedagogic skills and produce quality students.

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